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ART. 1.—*The History, Diagnosis and Treatment of Fibrinous Coagula of the Heart.* By DAVID W. YANDELL, M. D., of Louisville, Ky., Attending Physician for the Faculty at the Louisville Marine Hospital.

ARTICLE I.—INTRODUCTORY.

The disease of which this memoir gives an account is much less generally understood than any of the other diseases to which the heart is subject. Recent pathological discoveries have revealed it to be of much more common occurrence than has hitherto been believed. While the pathology of this disease is definitely and satisfactorily understood, its causes, diagnosis, and particularly it treatment, are still involved in doubt and uncertainty.—

There is no full and complete history of it in the English language. It will be my object to supply, as far as is in my power, this deficiency, and "to furnish," so far as may be possible, "such knowledge of this disease as is essential to its successful treatment. This knowledge ought at all times to be ready for use and application. The necessity for this use and application, whenever it occurs, is immediate, urgent, and pressing; it admits of no delay; there is no time for deliberate inquiry and consultation. The physician, in many, perhaps in most cases, is obliged to act upon his own single responsibility; it is his duty to be fully prepared, in advance of the emergency, to act promptly and aright."

ARTICLE II.—Lesions.

Preliminary.—I shall assume that the researches of Testa, Burns, Laennec, Corvisart, Bouillaud, Kreysig, Andral, Hope, Hasse, and other pathologists have established the fact, that there are some fibrinous coagula formed within the heart, during and after dissolution, and others formed for a longer or shorter period anterior to it, presenting various degrees of organization, and they are the cause of several well marked symptoms during life.

Long before any definite ideas of the true nature of the concretions in question were entertained, it was known that they were of more frequent occurrence in the right than in the left side of the heart. M. Bouillaud asserts that they are also more frequent in the auricles than in the ventricles. The principal cause of this difference is, that the blood is more easily retarded and rendered stagnant in the right cavities, and that it is in them especially that it accumulates during the last period of life, and after death. Bouillaud believes that other causes also may explain the circumstance: such as the frequency of phlebitis, which is sometimes propagated into the right cavities; perhaps, a more marked tendency to coagula-

tion in the venous, than in the arterial blood, &c., (Traité ii., p. 711, ed. 1841.)

Anatomical characters.—Hasse acknowledges two types of the blood coagula, the *unorganized*, and *more completely organized*, the distinctions between which are essential and obvious; there are, however, he remarks, so many transition forms, that it is often extremely difficult to come to a definite conclusion.* I believe, however, with Dr. Hope, that there is a third variety, which is possessed of equally distinctive anatomical differences, and which I shall include under the name of "*slightly organized polypi*," being the term given to it by that distinguished author. (Hope. Diseases of the Heart, p. 483. American edition.)

I. *Unorganized Polypi.*—Polypi formed after death, or during the last moments of life, are concretions of fibrin, identical with the simple fibrinous clot, so common in robust individuals. They are of a smooth, shining surface, yellow, pellucid, of the elasticity of jelly—particularly in dropsical subjects, or when the blood is very serous, and are "fashioned to the shape of the heart's cavities, especially at the origin of the pulmonary artery, where they often appear moulded with a faint impression of the valves. The gelatino-fibrous mass occasionally covers a clot of coagulable blood, in the same proportion as the buffy coat, the crassamentum in blood drawn from a vein; it, however, frequently constitutes the bulk of the concrement, and contains only a few portions striated or dotted with blood red, (Hasse.) Polypi of this description are more common and of greater volume on the right side of the heart, than on the left, are often found "proceeding, with flattened ends, into the large vessels," and

*The microscopic and chemical relations of coagulated fibrin will be found described in Henle's Annual Report, in Henle & Pleuffer's Journal, 1843, p. 168.

present no trace of internal organization and structural arrangement. The amount of these concretions is variable. They seldom, however, fill the cavities, and never adhere to their parietes. Bouillaud, it is true, has reported cases where the coagula in the different cavities of the heart amounted to twelve ounces, but it is necessary to state that a large proportion of them were formed after death. These characters are, in the opinion of Dr. Hope, sufficient to distinguish them from polypi formed sometime previous to death.

II. *Slightly Organized Polypi.*—It is a well known fact, that fibrin separated from the blood and become concrete in a living organ, preserves its vitality and is susceptible of organization in an equal degree with inflammatory lymph.

Polypi formed sometime before death, in which this organization has commenced, are of a much firmer consistence; more opaque, and less charged with serum; their fibrous texture is more distinct; they are often arranged in concentric layers; their color, instead of being uniformly whitish or yellowish, has, in parts, a pale flesh tint, sometimes slightly violet, from incipient vascularity; they are found more frequently on the left side of the heart than recent polypi are; and they adhere more or less firmly to the walls of the heart, from which it is scarcely possible to draw them away in a single piece, as the extremities remain attached under the columnæ carneæ.—The medium of adhesion is often a filamentous tissue, the rupture of which leaves a roughness both on the lining membrane of the heart and on the surface of the polypus. The surface also presents spots of blood penetrating more or less deeply, and sometimes ramifying inwards, as if to form vessels for the purpose of organizing the mass. Some of these polypi contain pus in the center; sometimes pure, at others, curdy or sanious—precisely what we so commonly see within coagula formed

by phlebitis.* (Hope on Diseases of the Heart, p. 483, and Hope's Morbid Anatomy, figs., 204 and 240.)

Dr. Hope considers the *globular vegetations* of M. Laennec, mere varieties of these suppurating polypous concretions. "They present themselves under the form of irregularly spheroid or ovoid balls or cysts, the size of which varies from that of a pea to that of a pigeon's egg. The cysts are smooth externally; and their walls, which scarcely exceed half a line in thickness, are composed of an organized substance somewhat firmer than the white of a hard-boiled egg, and resembling in opacity the oldest polypous concretions. The internal surface of the cyst is less smooth than its exterior, and appears formed of a softer substance, which sometimes gradually degenerates, in the direction from without to within, into a matter similar to the contents of the cyst. These contents, in the cysts which there is reason to believe the most recent, are bloody; in the older, they are like lees of wine,

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*Many writers, and especially M. Legroux, think this pus a product of inflammation of the concretion which contains it. "An inflammatory movement," says M. Legroux, "shows itself in the concretion. * * * * * * It softens in the centre, becomes granulated, passes to the sanious, then to the purulent state: subsequently, the pus is absorbed, and there only remain the exterior layers of the concretion, which have resisted the softening and which form the walls of the abscess or the cyst. (Legroux. Inaugural Dissertation, p. 35.) Dr. Hope is of the same opinion. Bouillaud, on the other hand, holds the following language on this point: "I think that such is not the ordinary origin of the pus which is found in concretions; this *product* appears to me to have been either secreted in the cavity of the heart, or to have been transported thither by absorption, and then to have occasioned the formation of a coagulum which has entirely enveloped it. At the period when pus in the center of a concretion is most frequently met with, the concretion offers scarcely the rudiments of organization, and one can hardly conceive how, in this stage, it could undergo an inflammation characterized by purulent secretion. I do not pretend to say, however, that when once well organized, sanguineous concretions may not inflame and suppurate. Nevertheless, this is not, if I do not mistake, a very common occurrence, (Traité, II, p. 610, edition 1841.

and in the oldest, they are puriform. The cyst adheres by a pedicle, which, according to M. Laennec, is of more recent formation than the cyst itself, being more translucent, and in a less advanced state of organization. The pedicle is interlaced among the columnæ carneæ, and united more or less firmly with the internal membrane.—The most common situation of these bodies, and where I have frequently found them, is about the apex of the ventricles. I am not aware that they are ever found in the great vessels; I have never seen them there," (Hope, p. 484.)

III. *More completely organized Polypi.*—When the polypi are in a more advanced state of organization they adhere by a true cellular tissue to the parts with which they are in contact, (Bouillaud.) They may be dated as far back as several months prior to the death of the patient, * * * * are completely opaque, like paste or cheese, exactly resemble the oldest fibrinous layers of false aneurisms, and adhere so firmly to the walls of the heart, that they cannot be detached without scraping with the scalpel, and sometimes not without removing the internal membrane, (Hope.) Engrafted thus, upon the living tissues, vessels shoot through them, they harden and assume a striking resemblance to certain fibrous polypi, to fungous tumors or vegetations, (Bouillaud.)*

*Concerning the connexion which exists between fibrinous coagula and the origin of certain lesions of the valves of the heart, (the adhesion of their angles and tendons with each other,) MM. Bouillaud and Legroux entertain the same opinion. M. Legroux has frequently seen fibrinous concretions interlaced with the tendons of the valves, in such a manner that these no longer formed a simple curtain, (the division into tendons not taking place until near the columnæ carneæ.) He also has no doubt that these concretions are the principal means of the union of the tendons, in cases where the lengthened valves no longer form a simple opening but a canal of greater or less size, (Legroux, op. cit., p. 55.) Both these writers further believe that in order for these concretions to contract intimate and firm adhesions with the valves on which they are deposited, it is necessary that they be formed under the influ-

Polypi, at their several degrees of organization, may undergo various changes. Some of them have been already mentioned. Bouillaud, in the Journal Complimentaire du Dictionnaire des Sciences Medicales, details a case wherein the concretion had been converted into a substance which bore a strong resemblance to encephaloid. M. Velpeau and others have since published similar cases. M. Dupuytren also met with examples of this kind.—He asserts "that the pretended carcinoma of the blood is but puriform matter developed by animal heat in the concretions." M. Bouillaud believes that polypi of "recent formation and small volume may be dissolved." In certain cases, also, he thinks it probable that fibrinous coagula of the heart, of small volume, are expelled into the circulation.*

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ence of inflammation; in such a case it is difficult to decide if these concretions are developed at the expense of the blood contained in the heart, or are the result of the secretion of an inflamed tissue. They both believe that the concretions which are firmly adherent, and susceptible of being transformed into vegetations, are the result of *an inflammatory secretion which adheres to the membrane at the moment of its formation*, (Bouillaud.)

* A very novel hypothesis has recently been advanced by the distinguished Professor Meigs, which relates so directly to the present division of our subject, that we cannot refrain from giving it a passing notice.

At one of the late meetings of the Philadelphia College of Physicians, it appears that Professor Miegs accounted for the removal of fibrinous concretions of the heart, and subsequently revealed the true origin of tuberculosis. With the highest respect for the talents, and greatest deference for the age of the learned gentleman, this, we think, is a work of much too great magnitude to have been despatched so summarily.

The train of reasoning by which Professor Meigs, on the occasion alluded to, arrived at this discovery (?) is quite as novel as the discovery itself. We give it *in extenso*, as an example of imaginative logic. It runs thus: Dr. M. was once present at a postmortem examination of a body in which there existed a large coagulum of blood in the right auricle of the heart; it nearly filled the cavity; the upper portion was rounded, smooth and polished; the lower portion was prolonged, and penetrated through the auriculo ventricular foramen, into the right ventricle, presenting there a ragged appearance, as though it had been gnawed by a

The fibrous, cartilaginous and cretacious transformations, which they are sometimes found to have undergone, are of very rare occurrence, and Grisolle affirms are never seen, except in cases where the concretion has depended on inflammation of the endocardium, and was accompanied by a pseudo-membranous exudation. It is needless to say that transformations of this nature may and often do become the origin of serious disease of the centre of the circulation. M. Grisolle has frequently seen adhesions of the valves, narrowing of the orifices, &c.,

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rodent, it having been evidently threshed and beaten by the cordæ tendinæ of the heart, into minute particles. [This, we have little doubt, is one of the processes by which the heart gets rid of recently formed coagula.] These small, comminuted fragments, into which a portion of the clot had been reduced, must have been carried by the torrent of blood passing from the heart, through the pulmonary artery, into the lungs, and there become arrested, when they reached the commencement of the capillaries. Here, being left in contact with the endangium, the common lining membrane of the whole arterial system, the questions suggested themselves to Dr. Meigs, what, then, becomes of them—what office do they then perform? He thus answers them: They —the fragments—may become compressed, but they cannot be driven onward by the action of the blood behind them: nor can they become either dissolved, absorbed, or decomposed; they consequently must remain, and forming special sacs, by gradually pressing out, laterally, that portion of the endangium with which they are in contact, into the adjacent cellular texture, *they become tubercles*. Years may pass by, and still find them in their quiescent state, but should inflammation occur in the lungs, from any cause, then do these arrested and encysted coagula become the cause of extensive disorganization in the surrounding tissues and of death.

We can very willingly credit the manner in which the heart overcomes, and eventually removes the obstacles opposed to its free action, in the form of coagula in its cavities or at its orifices, but that these infinitessimal portions of fibrin, no matter where arrested, whether in the capillaries of the lungs, mesentery, or brain, finally become tubercles, or have any real or natural connection with the formation of these bodies, we confess ourselves wholly at a loss to conceive. It is clear to our mind that we might, with as much reason and equal facility, establish that these "comminuted fragments" may, on sufficient provocation, be converted into any other of the malignant growths, into hydatids, biliary, renal, or urinary calculi, or, if allowed full scope, produce spasm, palsy, dysentery, prolapsus uteri, conjunctivitis, or blennorrhagia.

produced by degenerated, or, more properly, differently transformed fibrinous concretions.

ARTICLE III.—Causes and Formation of Fibrinous Coagula.

The causes which produce fibrinous concretions of the heart are *mechanical* or *vital.*

I. When fibrinous coagula result from mechanical retardation, and consequent stagnation of the blood, they occur under circumstances the most favorable to that stagnation; namely, during the last hours or days of waning life, in all diseases—especially chronic diseases which have occasioned cachexy, emaciation, extreme debility, or which have been accompanied by any considerable obstacle to the general circulation; for instance, dilatation with attenuation, softening, or great valvular disease of the heart. Under these circumstances, so retarded is the circulation, that blood will scarcely flow from veins opened by the lancet, and it is sometimes actually coagulated in them.* Dr. Hope mentions a number of cases of phthisis, in which this coagulation took place in the femoral veins, and caused edema of one or both extremities. That stagnation alone suffices to cause coagulation is a fact too familiarly known to require demonstration. We see it, out of the body, in blood drawn by the lancet; we see it exemplified within the body, by the fibrinous concretions that fill up false aneurisms; the operations for this disease, moreover, has, for its basis, the coagulation in question.† We see it in the thick and demi-concrete blood which follows venesection in the last moments of life, in the diseases of the valves and orifices of the heart, which greatly embarrass the circulation, &c.

Dr. Hope believes the adhesion of coagula from stag-

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* Hope, p. 485.

† Hope, loc. cit.

nation, to be occasioned by the irritating action of the bodies themselves on the walls of the heart; whence there results an exudation of lymph on the latter, which forms the agglutinating medium. He once saw a case in which loose coagula existed in most parts of the venous system —but, in the vena portæ, they were adherent wherever large trunks, subdividing into others, too small to admit them, had arrested their progress. (Had Dr. Meigs seen this case, the much mooted question of the origin of tuberculosis would have been resolved years ago.)

II. The vital or chemical causes are of three kinds: First, That which depends on a primitive or consecutive inflammation of the lining membrane of the heart, which concretes the blood at its surface. Second, The introduction of pus and different foreign substances, as mercury, mineral acids, &c., into the torrent of the circulation, thereby rendering the blood more coagulable. Third, To Burserius belongs the merit of having first made known the fact that the blood possesses an especial tendency to coagulate in the course of certain inflammatory diseases, particularly in pneumonia and acute articular rheumatism.* M. Grisolle, in his Pathologie Interne, suggests that, in these cases, the fibrinous concretions are formed by the same mechanism as the *couenne pleurétique*.

The well known fact that one of the first effects of inflammation of the coats of an artery or vein, is to dispose the blood within the vessel to coagulate at the inflamed portion, warrants the belief that the same thing may occur equally within the heart, when its interior is inflamed. The cases of fatal acute endocarditis, detailed by M. Bouillaud, in which there were concretions evidently formed sometime anterior to death, afford to the mind of Dr. Hope strong evidence that such is actually the case.

Pus, mineral acids, &c., introduced into the circulation,

* Grisolle. Traité de la Pneumonie, p. 75.

are other well known causes of coagulation of the blood by chemical or vital influences.

Relative to the third division of the vital or chemical causes, the general inflammatory condition of the blood, M. Bouillaud thus writes: "All pure inflammations, attended by violent fever, and when the blood drawn from a vein presents a good, firm, elastic, resistant, buffy coat, constitute a real predisposition to certain fibrinous concretions of the heart, which have then a great resemblance to the inflammatory buff." After referring to cases contained in his work on diseases of the heart, and to a memoir published by him in the Journal l'Experience, he continues, "it will be seen that in most of the instances in which the fibrinous concretions did not proceed from a mere embarrassment of the circulation, they accompanied either an idiopathic inflammation of the heart, or an inflammation of another organ, which reacted smartly on the heart, as well as on the whole circulatory system and mass of blood," (Traité, ii., p. 716.)

While Dr. Hope thinks this doctrine far from improbable, he conceives that it will "require for its establishment a greater number of cases than are recorded in the works of M. Bouillaud; for we must not," he says, "come too hastily to the conclusion in question, when we consider how frequent are acute inflammations, and how comparatively rare is their termination in polypus." The testimony recorded in the works of MM. Bouillaud, Grisolle, and Legroux, is, in my mind, conclusive as to the truth of this doctrine.

This tendency in the blood to coagulate in the phlegmasia is, as we have already observed, more remarkable in some diseases than in others, in pleuro-pneumonia, pneumonia, and acute articular rheumatism, for example. "In every patient who, during a period of three years, has died in our wards, of pure acute pleuro-pneumonia, we have found in the heart and great vessels fibrinous

coagula evidently formed in part before death. We have also met with similar concretions in other subjects, victims to other purely inflammatory diseases," (Bouillaud.)

So striking is this disposition in the blood to coagulate in this particular form of disease—pleuro-pneumonia—that M. Bouillaud, with his characteristic confidence, lays down, as a law of pathological anatomy, "*that fibrinous concretions are constantly present in persons who die of a pure acute pleuro-pneumonia, which is well characterized, and has reached the second or third degree,* (Op. cit., p. 718.) The same author reports a case of fibrinous coagula in an individual affected with grangrene of one of the inferior extremities.

The second and third cases, in the dissertation of M. Legroux, are examples of concretions occurring in spontaneous gangrene. In the Gazette Médicale, for the 25th of December, 1832, it will be found stated that "in this form of gangrene, the blood has a peculiar tendency to coagulation throughout the whole extent of the organism." On this point we do not hazard an opinion.

From all that precedes, I think, with Laennec, that we may deduce the following conclusions:

1. The remora of the blood, in consequence of obstruction to its course, suffices in itself to produce coagulation, and to determine the formation of a coagulum of organizable fibrin. Every cause capable of occasioning this remora, particularly mechanical obstruction to the circulation, and repeated and prolonged faintings, appears to me sufficient to produce this effect.

2. The coagulation of the blood in the vessels seems to produce, in some cases, particularly in the veins, a true inflammation, accompanied by the formation of a false membrane.

3. It appears certain, that occasionally, and especially in the veins, where the circulation is slow, an inflammation of the inner coat of these, may occasion coagulation

of the blood, in the vicinity of the lymph effused by the inflammation.

4. Pus absorbed in great quantity by a vein, may in several ways affect the concretion of blood—by rendering it less liquid from simple admixture,—by coagulating it by a chemico-vital action,—and by exciting inflammation of the containing vessel, (Laennec.)

And we may add, (5thly,) a *general* inflammatory condition of the blood, may, particularly in certain acute diseases, give rise to the formation of fibrinous coagula.

ARTICLE IV.—Signs and Diagnosis of Fibrinous Coagula of the Heart.

Pasta,* Morgagni, Kerkring, and many other writers of the two last centuries, denied that it was possible for the blood to become concrete during life, and consequently affirmed that it was incorrect to attribute to this cause any appreciable symptoms whatever. Others, again, attributed to concretions of the heart a number of lesions both of the circulation and respiration, which have since been determined to depend on other and organic disease of this organ. We are told that J. J. Rousseau repaired to Montpelier to be treated for polypus of the heart, a journey, as M. Bouillaud observes, which the illustrious melancholic could not possibly have performed on foot, had he been really laboring under the disease, the idea of which so deeply troubled his ardent imagination.

I. Fibrinous coagula, of small volume, offering no obstacle either to the play of the valves or cardiac circulation, give rise to no perceptible functional disturbance.—Under different circumstances, they produce various symptoms—the more important of which we propose to enumerate.

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* The opinions of J. Pasta will be found contained in two letters published by his kinsman, A. Pasta, and entitled: "*De motu sanguinis postmortem et de cordis polypo in dubio revocato,*" published in 1737.

One of the earliest, most evident and necessary effects of fibrinous concretions of the heart, is to cause a greater or less obstacle to the circulation, according to their volume and situation. Dr. Hope has generally found those filling up an auricle, produce this effect in a greater degree than any others—probably, he suggests, because the auricle, from having less contractile power to expel the stagnating blood, gets more completely charged with concretions; and partly, also, because auricular-polypi usually send off prolongations or projections into the orifices, which not only impede the action of the valves, but also choke up the passage. Those concretions which distend the auricular appendage, produce no disturbance, while those which occupy one of the orifices of the heart, will give rise to all the accidents of organic narrowing. When the concretion attains sufficient size to nearly obliterate the cavities or orifices of the heart, and completely intercept the course of the blood, death rapidly supervenes in a state of suffocation or syncope.

When the coagula are of considerable volume and distend the cavities of the heart, the symptoms are those of great embarrassment in the circulation. The pulse is small, unequal, and intermittent; the face is livid; the extremities cold; in most cases, there is nausea and vomiting of all ingesta; an intolerable sense of suffocation; and extreme restlessness and distress. "Venous congestions supervene in some instances; in others, the patient loses consciousness, and sinks into coma, (Bouillaud.)

Physical Signs.—M. Legroux was the first to note that when the concretions embarrassed the play of the valves, or obstructed the orifices, the beats of the heart became dull, smothered and obscure;* and in some instances

* M. Legroux attributes the obscurity of the sounds of the heart to the accumulation of blood in the cavities of this organ, (Diss. cit., p. 40.) M. Bouillaud thinks otherwise. "The obscurity of the sounds proceeds from the play of the valves being impeded," (Hope.)

even morbid sounds, as the *bruit de souffle*, &c., were perceived. MM. Bouillaud and Grisolle have since corroborated this, by their own researches.

"When, in a patient who, till then, had presented regular pulsations of the heart, these suddenly become so anomalous, confused, and obscure, that they can no longer be analyzed, we may suspect the formation of a polypous concretion. If the disordered action exists on one side of the heart only, we may consider the thing as almost certain. For instance, if we find the pulsations of the heart, under the sternum, confused and tumultuous, although the day before they had been regular, we may look upon the formation of a polypus in the right cavities as very probable; and the more so, if the contractions of the left ventricle, explored between the fifth and sixth ribs, are more distinct," (Laennec, p. 655.) In polypi of considerable magnitude, "the beats of the heart are irregular, tumultuous, precipitate, and the dullness of the precordial region is more complete and extensive," (Grisolle. Path. Int., p. 353.) "The diminution or the loss of sound in one or more of the cavities of the heart is a certain sign of fibrinous concretions," (Legroux. Diss. cit., p. 41.

There are a number of cases on record, in which a murmur was found to accompany the sounds. Dr. Broue, in the Journal Hebdomadaire de Med., details a case in which the sounds of the heart were accompanied by an acute whistling murmur. Dr. Desclaux has reported a case in which there was a whining murmur in the precordial region. Dr. Hope never met with examples of this description, but admits the possibility of such a thing, if the polypus should happen to entangle a valve, while the current thorough the auricles and ventricles, remains tolerably free. Before, however, the murmur can be assumed as a sign of polypus, in a given case, it must be proved, first, that it did not previously exist, and, sec-

ond, that it is not a result of valvular tumefaction from acute endocarditis," (Hope.) While the irregularity described by Laennec and Grisolle, is a sign of polypus in cases where the action of the heart was previously regular, it does not possess the same value in cases where this previous regularity did not exist, and such cases form a large proportion of the cases in which polypus occurs, (Hope.) Should this irregularity be suddenly aggravated—become unusually "anomalous, confused and obscure"—and if, together with this aggravation, the *general signs* be taken into consideration, the diagnosis, even in these latter cases, may be almost always formed with accuracy, (Hope.)

Dr. Hope thinks polypi formed a considerable period previous to death, are not so easily detected—their deposition being more gradual. Still, if symptoms of the above kind, both physical and general, come on more rapidly than can be accounted for by the ordinary progress of the disease, or if they are such as the disease could not be supposed capable of producing, there is strong reason to suspect a polypus.* The small *globular* polypi often exist without producing any obstacle to the circulation, or any irregularity of the action of the heart.—In general, however, they are found in those who have been in a moribund state for many days, and sometimes many weeks before death.†

Diagnosis.—There is a wide difference of opinion between M. Grisolle and M. Bouillaud relative to the certainty of the diagnosis of polypous concretions. M. Grisolle‡ remarks, "that when the functional disturbances which we have enumerated, become suddenly developed in a subject who was not, at the time, suffering from disease of the heart, we should *suspect* the formation of polypous concretions in the cavities of this organ. M. Bou-

*Hope, p. 487. †Loc. cit. ‡Grisolle. Path. Int., p. 353.

illaud affirms that he was enabled to diagnosticate positively, or state as probable the existence of concretions in twelve out of fourteen cases.

In all cases of disease of the heart, whether acute or chronic, previously unattended by any great difficulty or oppression, of orthopnea and considerable disturbance in the beats of the organ, suddenly supervene, we should suspect the formation of concretions.

There is nothing positive known of the time that concretions commence forming, nor of their duration. There is every reason to believe that a large number of them are absorbed, or removed by the torrent of the circulation; while others again, continuing to increase, induce death. The opinion of Prof. Mott, on this subject, we have already given at some length, and shall not again refer to it.

ARTICLE V.—Prognosis and Treatment of Fibrinous Coagula of the Heart.

I. The prognosis of fibrinous coagula of the heart, when they are sufficiently voluminous to sensibly embarrass the circulation, is, as may be readily inferred from what we have previously said, most grave; they almost always, sooner or later, terminate in death.

When called upon to express an opinion in such cases, we must always give due consideration to the disease with which the concretions are associated, and of which they are strictly but the speaking accident. The more dangerous the disease is in itself, the less promising should be our prognosis of the concretions which are the consequence.

II. *Treatment.*—"No reliable treatment of fibrinous coagula of the heart is known," (Grisolle.) All treatment must necessarily be uncertain in a disease like this, when it is once completely developed, (Bouillaud. "The

treatment is mainly preventive," (Hope.) M. Bouillaud advocates general bloodletting, with great zeal. M. Grisolle esteems it useful. Dr. Hope thinks it dangerous.—"To prevent the formation of concretions of blood *in diseases of the heart*, whose property it is to impede the current of the blood, it is useful to employ bloodletting from time to time, and to dilute the blood, in a manner, by aqueous beverages," (Bouillaud.) "I cannot but protest against the indiscriminate, I had almost said random, manner in which M. Bouillaud advocates bloodletting for the prevention of polypus. * * * * I have seen enough of bloodletting, * * * to know that, in dilatation of the heart, in softening, and in advanced cases of valvular disease, bloodletting will not only fail to prevent polypi, but will actually induce them, * * and, moreover, will favor the supervention of dropsy, exhaust the vital powers, and hurry the case to its fatal termination. Moderate bloodletting may, indeed, be admissible, in the early stages of hypertrophy, even when complicated with valvular disease, but these are not the cases in which polypus is apt to occur," (Hope.) "Bloodletting is likewise the best means that can be employed against concretions of the heart *already formed*. It has succeeded beyond my hopes in a female admitted under my care. * * A prey to the most imminent suffocation, and offering, moreover, the physical signs of polypus, * * she has been bled three times, and is at this moment' [eighteen days after] "in a satisfactory state," (Bouillaud.)

The remarks of Dr. Hope, on the treatment of polypus, are of such rare excellence, that I shall copy them almost entire:

"The best mode, according to my observation, of obviating polypus in advanced cases of organic disease of the heart, is, to keep the patient in a state of the *utmost*

possible tranquillity, and in the easiest attainable position, so that the circulation may not become embarrassed from being hurried; to avoid not only nauseants and digitalis, but any other unpalatable remedies which disgust or derange the stomach; to avoid, for the same reason, any but the most simple and digestible articles of diet, and not to introduce much into the stomach at once; for the action of the heart invariably becomes disturbed whenever the stomach is considerably distended either by food or, what is almost as bad, by flatulence, the effect of both being to prevent the descent of the diaphragm, in addition to their influence, through the medium of the nervous system. Though the administration of aqueous drinks, with the view of diminishing the coagulability of the blood by dilution, is plausible in theory, I have generally found it inadmissible in practice beyond a moderate extent, in consequence of the intolerable flatulence which it is apt to generate. Nor must it be forgotten that nature often contradicts the very principle itself; for, while the practitioner is diluting the blood, she is often doing her utmost to get rid of that dilution in the form of dropsy; and that her measures are often the wisest, no one will deny who has observed the great relief to the vascular and respiratory system, which frequently follows a considerable serous infiltration. There can be no doubt, indeed, that dropsy, under these circumstances, is a curative effort of nature.

Such are the negative means of obviating polypus; but there are others of a positive nature, to which the practitioner may resort with advantage. The general surface and especially the extremities should be kept comfortably warm, so as, by diffusing the circulation, to prevent congestion in the heart and great vessels. At the same time, cool, fresh air may be admitted to the head, as this often wonderfully alleviates the craving for breath and

consequent restlessness of the patient. On the same principle, the use of the fan is most agreeable. Of medicines, I have found those containing sp. eth. sulph. comp. and ammonia sesquicarbonas the most generally useful—probably because, as diffusible stimulants, they distribute and equalize the circulation. In circumstances of great debility, the addition of more permanent stimulants, wine or brandy, becomes indispensable. When paroxysms of congestion of the heart come on, indicated by unusually confused, irregular action of the organ, with an exceedingly small, weak, irregular pulse and suffocative dyspnea, no remedy affords so much relief as a foot bath up to the knees, at as high a temperature as the patient can bear it. If he cannot move, the same may be accomplished with much less fatigue by wringing a small blanket out of hot water, and surrounding the legs with it up to the knees, discomfort being prevented by enveloping the whole in india-rubber cloth. This may be repeated two, three, or even four times a day, if urgently required, the legs, in the intervals, being kept warm with flannel."

The preparations of soda and potass, exercising a solvent effect on the blood, M. Legroux thinks that the salts of these two bases may be used with advantage. He cites no case, however, in support of this theory. A well known effect of these substances is to render the blood florid out of the body, "and the experience of Dr. Stephens in yellow, and other typhoid fevers, and of many in this country in malignant cholera, render it highly probable that they have some corresponding, or at least salutary, effect on the blood within the vessels," (Hope.) We are acquainted with a number of physicians, of high standing, and among them we may mention that estimable gentleman and skilful practitioner, Prof. Lewis Rogers, who regard the agents in question as possessing solvent properties in a very high degree, which may be turned to good account in the treatment of those diseases in

which they are indicated. A favorite remedy with Prof. Rogers is the chlorate of potass. Dr. Stephens gives a combination of this and the carbonates of potass. and soda. I agree entirely with Dr. Hope, however, that "further observation is necessary to prove whether these remedies are calculated to obviate polypus." Still, I should not hesitate to administer them were I called to a case of threatened polypus.

I have thus attempted to draw, from different authorities, their several modes of treatment, when the case is not connected with inflammation. It will be remarked that there are between two of them, at least—Dr. Hope and M. Bouillaud—irreconcileable differences of opinion, particularly in relation to the use of the lancet. It has been our good fortune to witness, during several consecutive winters, the practice of the latter of these very eminent gentlemen, and while we must, in candor, admit that we fall very far short of entirely adopting his views of the universal applicability of the lancet to almost every variety of disease, we feel it due to him to state that we have seen, under circumstances like those which now engage us, the very happiest, and, we may almost add, astonishing effects follow free and repeated venesection. It is not our purpose, however, to discuss the merits of this question. We leave that to older and abler hands.

Before concluding our remarks, which have already greatly exceeded our original design, I wish to refer to another state in which the treatment of fibrinous coagula of the heart becomes of even greater interest than in the preceding. It is this: when the disease is associated with inflammation. When this is the case, the inflammation itself must be treated. If the inflammation be of any of the thoracic or abdominal viscera, or, indeed, of any organ or portion of the body, the treatment is to be regulated according to the intensity of the attack, the importance of the suffering organ, its relations to the disease in question, &c., &c.

I now close, with the concluding paragraph in the chapter devoted to this subject, in the treatise of Dr. Hope, to which I am so largely indebted for much contained in this memoir; "and if," says he, "the measures which have been already recommended* for pericarditis and endocarditis be adopted, I believe, according to my own observation, that polypus will be of very rare occurrence."

Louisville, Ky., April 30, 1850.

Art. II.—*The Bandage in the Treatment of Fractures, Ulcers, Gun-Shot Wounds, Hemorrhage, &c., &c.* By Theodore S. Bell, M. D., of Louisville, Ky.

There is scarcely any class of diseased actions, that are consigned to the care of the surgeon, that receives a greater variety of treatment, than that which passes under the name of ulcers. Amidst the bewildering lights of authorities, on the method of treatment, it is difficult for the tyro to make a proper selection, and when he passes beyond the primeval stage of his surgical life, he soon, as a general rule, degenerates into the practices of the routinist. Authorities generally tell us to make special applications to the local affection, and these are usually so much in unison with the patient's ideas of the proper method of treatment that they are readily resorted to. Balsam of Peru, the terebinthinates, citric unguents, solution of sulphate of copper, fumigations of sulphur and iodine, blistering ointments, aconitum napellus, black wash, creosote, electricity, iodate of the protoxide of mercury, iodide of starch, oxide of silver, pectic acid as a poultice, periodic acid, the bromates, succon-

* These measures are sufficiently well known, to need no repetition here.

ates, mucic acid, alloxan, hydrated peroxide of iron, are a portion of the things that are extravagantly lauded in modern practice, and they constitute a wilderness of perplexity that must puzzle any one in attempting to travel through it. In the chase after these false lights, the philosophy of ulceration, and the proper treatment of the diseased actions are lost sight of.

In a former number of this Journal, an attempt was made to call the attention of the profession to the testimony of distinguished authorities in surgery, to the uses of the bandage in fractures, gun-shot wounds, and ulcers. There was, of course, no thought of setting up a claim to originality in the views advanced. In the full blaze of the lights reflected from the pages of Heister's "General System of Surgery," Underwood's "Treatise on Ulcers of the Legs," Baynton's "Descriptive Account of a New Method of Treating Old Ulcers of the Legs," Whately's "Practical Observations on the Curé of Wounds and Ulcers on the Legs, without rest," and John Bell's "Principles of Surgery," from the latter of which extended quotations were made in a former paper on the bandage, all bearing testimony to the great utility of the roller, in the treatment of the surgery indicated in these remarks, such a claim would be in the highest degree preposterous, and the man who should make it, would show such a contemptuous appreciation of the intellect of his readers, that he would be justly amenable to the scorn of the profession. No modern authority has, in my judgment, improved upon the practical views of Heister and John Bell, upon the various uses of the bandage, and the highest efforts of a reader of the works of these surgeons, must be made by enforcing their views, by calling attention to their valuable lessons, and in restoring to them their just and honest fame.

In view of these facts, and of the neglect of the authorities I have named, I quote from Mr. Critchett's lec-

tures on "Ulcers of the Lower Extremities," delivered in the London Hospital," in the summer of 1848, the fol lowing just and appropriate views:

"There exists such a plethora in medical literature, that it behooves each new commentator upon Nature's morbid operations, if he would expect to obtain any attention from his professional brethren, to accomplish one of three objects;—he must either propound new and original views, founded on legitimate induction, or he must collect the rays of light that lie scattered over the fields of pathology, and present them in a clear, concentrated and useful form; or, lastly, he must resuscitate some old principle, valuable in a practical point of view, which, from some accidental cause, has been allowed to slumber in neglect and oblivion; it is in this latter and humbler capacity that the author of these lectures breaks silence; he claims not the high honor of having discovered a new window, whereby light may be admitted into our surgical temple, but simply to have rendered transparent one that had become obscured and useless. The author's main object, then, in the publication of this little book, is to place the principle of mechanical support, in the treatment of ulcers of the lower limbs, on a correct and scientific basis; for although, as he has elsewhere endeavored to show, this has already been briefly done by the late Mr. John Scott, in his work 'On Diseased Joints,' a reference to all the best surgical authorities since that work appeared, proves how entirely that principle is still, if not unknown, at least most imperfectly expounded."

These are the sentiments I feel on the subject of the bandage, and the views by which I desire to be judged. I am aiming at "the old paths" of surgery, because I believe them to be infinitely more useful, more practical, more philosophic and successful than the most of the new ones in the modern school. I am convinced that the ancient lights of the profession are too much neglected in

the race after the "new things" of the day. In our ignorance of what the ancient observers have recorded, we are often deceived by claims of originality in things that are as old as the time of Hippocrates. A medical writer, of some celebrity, pointed out a number of instances of this kind a few years ago, and his references to the observations of Areteus, and Galen, may surprize some of our readers. The doctrine of the distinct function of the sensatory and motor nerves, over which modern physiologists are growling, and the proof of which doctrine conferred so much deserved fame on Sir Charles Bell, was alluded to by Areteus, and "distinctly and emphatically propounded by Galen." We have not space to spare for a quotation from Galen, but the doctrine is lucidly set forth by him in the ninth and fourteenth chapters of his fifth book: "De usu Partium." Philosophical Anatomy is considered quite a modern science, but Aristotle was almost as deeply imbued with it as the Meckels and Serres of our day. Cuvier labored in what he considered original investigations, but when he came to study the four books of Aristotle, "De Partibus Animalium," he was surprized and delighted to find that the comprehensive and acute mind of the Stagyrite had forestalled him in a great variety of the principal facts of philosophical anatomy.

The writer to whom I have alluded, says: "That view of life which regards it, whether in its healthy or its morbid manifestations, as a state of perpetual relation to the agents by which the living organism is surrounded, has resulted from a very advanced stage of physiological and pathological knowledge, after the successive explosion of a variety of hypotheses." Yet, this is precisely the view that was taken by Hippocrates, and we have no doubt of a fact that has been stated in connection with this subject, that Hippocrates "cultivated medicine on more enlarged

and scientific principles than most of those who call themselves medical reasoners, even in the present day."

Again: the crude condition of chemistry in the days of Hippocrates and Galen, afforded them no aid in their prelections on the fluids of the human body. They constructed a fantastic system of humoralism, which should have been improved by the lights of an advancing chemistry. But, instead of doing that, as has been correctly said, "modern inquirers ran into an extreme solidism, as false, in point of fact, as, and infinitely more absurd in reasoning than the old humoral doctrines, the insufficiency of which was demonstrated by the progress of chemical science." If, instead of running after the vagaries of solidism, with its myriad of errors, "men had been content with rectifying the humoralism of the ancients, by the facts of modern chemistry, we should, by this time, have attained to views of organic chemistry which might have been brought into very profitable relations with medicine, instead of being, as we are, on the mere threshold of the subject."

The same writer says: "Not only, then, the germs, but a pretty ample development of all those doctrines which have given the greatest impulse to medicine in our own times, are to be found in the writings of the ancients."—In view of these facts, the readers of these remarks will rejoice to learn, that the French Academy is preparing an edition of the works of the "Fathers of Medicine," and that they intend to make it, in every way, worthy of the Academy. Neither expense, time, labor, nor investigation will be spared in making a library of ancient medical literature that will be invaluable to the medical student.

These things have been referred to, in order to show the readers of these papers the value of the "old paths" which were opened in the first paper on the bandage, and which it is my design now to pursue again. Wiseman,

Baynton, and Scott gained no small degree of credit by their use of the bandage, but Heister preceded them in all the useful qualities of that agent. I should rejoice to see the following sentiment of old Hiester properly impressed upon the mind of every person who wishes to practice surgery beneficially to his patients, and creditably to himself. That surgical reputation that is founded upon a thorough and correct appreciation of the bandage, cannot be easily shaken. Heister said, in 1739:* "The general use and necessity of bandages in relieving and curing the disorders of human bodies, is very apparent, not only from their being thought worthy to be made an important subject of consideration by the first fathers of physic, as Hippocrates and Galen, with other eminent physicians; but also from there being hardly any operation in surgery practicable without their assistance. Even where an operation has been performed, in all other respects, with the greatest judgment and dexterity, yet if the surgeon miscarry in his bandage, by an unskilful application thereof, all his other endeavors, though just and laudable, may either totally, or in a great measure, prove fruitless, to the great damage of his reputation; and this more especially in the treatment of wounds, fractures, luxations, amputations, and the like. We may add, that in fractures, and luxations, after a reduction of the parts, the whole cure depends entirely on the bandage, and, in many profuse hemorrhages, nothing can afford so certain and speedy relief, as an exact deligation of the wound with a fit compress and bandage, which may even save the life of the patient, as every one knows that has the least knowledge of the nature and treatment of wounds. To say nothing of the recommendation, that the neatness and readiness of making a bandage and dressing will give the surgeon, both as to his patient and the spectators,

* Heister's Institutions of Surgery. Part third, p. 292.

who judge of his other abilities by his performance of what comes under the general cognizance of every one's senses, as Galen justly observes."*

I know of no more important paragraph in surgery than the one just quoted from Heister, and all who may acquire proper facilities and understanding in the use of the bandage will, after the experience of a few years has taught them its value, fully corroborate the remark made above. Heister employed the bandage quite as extensively as any modern surgeon does, and for the same objects. His name is sometimes appealed to as an authority for the use of balsam of Peru for ulcers, but an examination of his remarks scarcely supports the idea that he was favorable to any thing of the kind. He says: "It is not easy to say what should induce almost all physicians to cry up certain balsamic remedies, as having a peculiar virtue in generating new flesh: besides, our digestive is endowed with a balsamic power; *but to say the truth, the generation of new flesh is not so much owing to the use of any particular medicines, as to the benefit of Nature.*"

I have made these references to the ancient literature of surgery and medicine, in the hope of inducing some readers to look into the works of the founders of medicine. I am persuaded that much has been lost by neglecting their writings, and that practical medicine would now be much farther advanced, if they had been treated differently. Of one thing the reader may rest assured—his examination of these ancient writers will satisfy him that many things which are claimed as new, among moderns, were well known and appreciated by the early observers of medicine. Many a modern writer has claimed for himself an overwhelming originality in matters that were perfectly familiar to the profession centuries ago, and these

* Lib. de Fasciis, where he directs: Quod injicitur, celeriter, jucunde, prompte et eleganter injiciatur.

pseudo-originals gather around them a clan, who vindicate the former existence of Balaam's beast, by showing that they are his lineal descendants. Their actions, in relation to their master, perpetually repeat the language of their ancestor: "Am I not thine ass, upon which thou hast ridden ever since I was thine ass?"

It would be needless to urge the importance of correct views of the pathology and treatment of ulcerative action. The student will hasten from almost anything to see the operation of lithotomy, and in the course of years of practice he may never be called on to see a case of calculous disease; but his introduction into practice may probably be based upon the treatment of ulcers, and upon his success must depend his standing. Should he not, then devote himself to that which is most likely to pave the way to his professional eminence? Sir Benjamin Brodie, quoted by Mr. Critchett, has expressed the sentiments that should govern all medical men in matters of this nature. That distinguished surgeon, who had attained the highest distinctions of his profession, from the exalted position he had reached, thus showers down the ripe fruits of a long and well matured experience: "Ulcers of the leg are cases in which there is no question about the patient's life or death; and I think it very probable that many among you may pass by the bedside of such a patient, without thinking it worthy of attention. But I am not disposed to regard it in this manner. Although the patient may not die of this malady, yet without care it may render him miserable for life. The disease may be very much relieved by proper treatment, and it is one of very common occurrence. You examine carefully a case of aneurism, a case of stone in the bladder, and so on; but these are things of comparatively rare occurrence, and which will not fall under your treatment in the beginning of your professional lives; but ulcers of the leg are cases of a very distressing nature, and such as

meet you at every turn of your practice; and your reputation in early life will depend more upon your understanding a case of this kind than upon your knowledge of one of more rare occurrence."

There are few diseased actions that are of more interest than those developed in the various forms of ulcers of the lower extremities. It is of the greatest importance that their character shall be well understood, and that a successful treatment shall be inculcated. An indication has been given, in the first of this paper, of the dire confusion that prevails among surgical writers on this subject. It is distressing even to look at an inventory of the articles commended for the cure of ulcers, and the fact that we often meet with descriptions of "old ulcers" is conclusive proof how futile and fruitless the articles of this inventory are in their application to ulcerative inflammation.

I do not purpose to urge the bandage as the sole agent for the treatment of ulcers; my design is to show what an important element it is in the treatment of those affections, and to point out the cases that call for its agency, and the conditions that require other means in aid of its powers. I have repeatedly seen an ample trial given to the various topical applications that have been enumerated in the commencement of these remarks, and have enjoyed abundant opportunities for comparing the results of the roller treatment, with every other form of management that has been commended, and I feel no kind of misgiving as to the truth of the statement, that the comparison was equal to the contrast between light and darkness, between uniform success and uniform failure, between comfort, ease, rapid amendment, complete and permanent recovery, and pain, restlessness, long continued suffering, and utter failure. It is humiliating to take up such a work as Sir Everard Home's Treatise on Ulcers, to read it, in full view of the amazing opportunities he enjoyed

for attaining full knowledge of the whole philosophy of ulcerative action, and its proper management, and then turn to the lights of experience and observation. I am almost tempted to wish that Sir Everard Home had burned his own work on ulcers, rather than the immense masses of John Hunter's manuscripts, which he destroyed, to keep the world from discovering that he owed all his honors, his reputation, and distinction to his pilferings from his immortal kinsman.

In order to facilitate a full and correct understanding of the subject to be submitted to the reader, I shall divide this paper into departments. The first of these will properly be:

The Causes of Ulceration.—A full understanding of the laws of the venous circulation, will pave the way to a correct understanding of the phenomena of ulceration, especially in the lower extremities. Nine ulcers in ten occur in the lower extremities, and the most intractable forms are generally in the vicinity of the malleoli. These facts are constantly insisted upon by surgical authorities; the varicose condition of the saphena veins is usually connected with ulceration, and this condition was fully recognized by Heister, and by numerous authors since his time. John Hunter's investigations threw a great deal of light upon the process of ulceration, and his school of surgeons have made great improvements in the treatment.

Sir Benjamin Brodie, in his clinical lectures on surgery, has done the subject more than ordinary justice.

Mr. Critchett, in a series of lectures delivered in the London Hospital, has added valuable principles to the treatment of ulceration.

The two surgeons last named, insist with much force upon the varicose condition of the veins, in connection with the generality of ulcerations of the lower extremities. In addition to this, the locality of an ulcer has

much to do with its entire character. In the language of Mr. Critchett, "when ulcers occur in the lower extremity, the more remote the position of the sore from the center of circulation, *(cæteris paribus,)* the more tedious and uncertain is the reparative process." This fact should admonish the surgeon of the necessity of increasing the energies of his efforts at reparative measures in a ratio with the remoteness of the ulcer from the center of circulation. Another important feature in the treatment, arising from the position of the ulcer, will be insisted upon in another part of this paper.

Mr. Critchett insists upon the fact that cramps in the muscles of the legs have something to do with a varicose condition of the veins—a statement more plausible in theory than in reality. Mr. C. argues that in cramps of the legs, a pressure is made upon the deep-seated veins, and thus a larger amount than the usual quantity of the returning blood is thrown into the superficial veins, which causes dilatation. In this way the valves are separated, and, when their uses are gone, they shrivel, and, in a great measure, perish. This theory is scarcely borne out by observation. I have known many persons who were subject to repeated attacks of cramps in the legs, for years, who were not more subject to ulcerations than those who were not the victims of cramps. Cholera, in which cramps of the legs are of a violent character, has not increased the tendency to ulcerations, and children who are peculiarly liable to spasms, are not peculiarly the subjects of ulcerations.

Of the value of the following deductions of Mr. Critchett, there can be no kind of doubt, and they are important to a correct uuderstanding of the subject of ulceration. Mr. Critchett says: "A dilated condition of the veins of the lower extremity, from whatever cause it may spring, may terminate in five different ways:

"First. It may produce hypertrophy of the coats of the veins, and thus resist farther distention.

"Secondly. The principal veins may become plugged up more or less completely with fibrine, and thus by diverting the current of blood into other channels, the disease may become stationary.

"Thirdly. The capillaries of the skin and subcutaneous cellular tissue may become likewise dilated, giving rise to permanent discoloration of a large portion of the skin, and to thickening and firm fibrinous deposit beneath it, and thus the disease in the larger trunks would seem to be checked, if not arrested.

"Fourthly. The larger veins may become more and more enlarged and elongated; the smaller trunks may become gradually implicated, until what I have denominated the spongy leg is produced; this condition sometimes relieves itself by hemorrhage.

"Fifthly. In this spongy condition of leg a congeries of red vessels may form, in the centre of which a white patch appears on the skin, which is the immediate forerunner and indicator of ulceration; which, being established, is another way in which the congested veins are temporarily relieved."

As Mr. Critchett very properly remarks, this state of things is not only a frequent cause of ulcers, but also a serious barrier to their successful treatment, and a very constant source of their recurrence.

One of the most common causes of this varicose condition of the veins of the legs in females, is the pressure of the gravid uterus, and I have often seen alarming hemorrhages in this condition. Avocations that require persons to stand a long time in one position, is another fruitful source of it. The most common cause, in the cases that have come under my observation, is debilitating attacks of fever, which, by enfeebling the vital forces of the veins, produce engorgements in the superficial veins of the lower extremities. That form of fever, called the "Cold Plague," which raged, many years ago, through

the United States, might have been tracked, from one end of the Union to the other, by the frightful and disastrous ulcerations it caused. It made a saturnalia for manufacturers of wooden legs.

A plethoric habit may easily cause ulcerations; the carbuncle may be considered a form of ulceration, and that is often the result of free eating. The use of alcoholic drinks is a well known cause of a very intractable kind of ulcer. There are few that are more difficult to manage, and none that are more apt to return. Those who have had anything to do with these ulcers, are fully cognizant of the difficulties that attend their permanent cure.

Deranged menstruation gives origin, sometimes, to what is called the menstrual ulcer, and as the treatment is modified by the character of its origin, it should be clearly recognized. In deciding upon the treatment of any ulcer, it is important that the cause of the diseased action shall be accurately known.

Division of Ulcers.—A great many distinctions have been enumerated in classifying ulcers, but the best classification I have seen is the one proposed by Mr. Critchett. He divides ulcers into simple, or local; and specific, or constitutional.

The simple, or local, are divided into acute, or spreading, subacute, chronic, healthy, irritable and varicose.—The specific, or constitutional, are arranged under the various heads of strumous, syphilitic, phagedenic, periosteal, menstrual, edematous, and malignant.

It is well to bear in mind these distinctions, for the proper treatment of these diseased actions depends mainly upon the ability to recognize the precise characters of each one. Upon a full knowledge of the laws of the venous, absorbent, and secreting systems, a nice discrimination of the varying phases of ulcerative action, and a clear and satisfactory diagnosis in the varieties of ulcers, mainly depends the success of the treatment. It must be

ever borne in mind that what may be serviceable at one stage of an ulcer, may be injurious in a different stage.

I do not think it necessary to encumber this paper with a minute description of the ulcers already enumerated.—A brief sketch of a few of the prominent ulcers will be sufficient for the purposes of this essay.

The Acute Ulcer.—There is no scarcity of descriptive accounts of ulcers, but the authority I prefer is Mr. Critchett. His descriptions most nearly accord with my own experience and observation. Of the acute ulcer, he says: "This form of ulcer is attended generally with severe suffering, which is greatly aggravated when the limb is placed in a depending position. There is great heat and tension, and the pain is of an aching, growing character. The ulcer looks uneven and glassy, the edges are irregular and undefined, sloughs, varying in size, are often seen on the surface; the discharge is thin and ichorous; the surrounding parts are of a bright red color, or sometimes of a peculiar speckly red and white aspect." Mr. Critchett objects, it seems to me strangely, to the use of the bandage in this stage, but he very properly urges the use of the water dressing. I know of no application of the bandage more uniformly useful than in this form of ulcer. In combination with the water dressing, there is nothing more to be desired.

In the *sub-acute stage* of ulceration, the points to be attended to, are the color and temperature of the adjacent parts, and Mr. Critchett adds, as a useful guide, the amount of pressure required to empty the vessels, and the rapidity with which they re-fill.

The Chronic Ulcer.—This is the form of ulcer most generally presented to the notice of the physician. The acute and sub-acute stages are usually treated with mullen leaves and poultices of urine, and, proving intractable under such scientific assaults, they pass into the hands of the surgeon. The leading characteristics are, almost an

absence of heat, and a discoloration of the skin, running into a blue or russet color. The sore looks as if it were deep; the edges may be everted, or inverted, or the face of the ulcer may present a flat appearance. These peculiar edgings often give occasion for the display of meddlesome scalpels and scissors.

The Irritable Ulcer.—This ulcer, according to Mr. Critchett, is usually small and superficial; is most commonly found in females; is generally situated about the ankle; and sometimes, but not invariably, complicated with varicose veins. The distinguishing characteristic is that the appearance and symptoms give no adequate suggestion of the extreme amount of tenderness and suffering experienced by the patient.

The specific ulcers, the strumous, phagedenic, and syphilitic, it is unnecessary to describe with anything like a detail of differences. Their character can be easily detected, and the treatment will be indicated in its proper department. I pass to a general survey of the subject.

If it were not my desire to make this essay practical in its character, I should be tempted to give a historical sketch of the treatment of ulcers, and the commendations of the bandage, as the chief agent of their cure, from the earliest era of medicine down to the present time. It is remarkable that in all epochs of surgery, traceable by written records, the bandage, as used in the present day, has been uniformly commended by able, judicious, and experienced men, and has been disregarded by the mass of practitioners. It is so much easier work, on the part of the surgeon, to order a poultice, a wash, or an unguent, than to apply a bandage neatly and properly, that this valuable agent does not enjoy that position, generally, to which it is entitled. The general ignorance, indeed, is so great, of the character of its merits, that men who have urged its value with zeal and earnestness, in the very terms and extensive appropriations given it by

various authors, at least one hundred years since, have been very foolishly looked upon as original. If there is any use of the bandage taught now, that was not forcibly commended by Heister, Heberden, Wiseman, Underwood, Benjamin, and John Bell, to say nothing of many others, I confess I do not know anything about it. To men well read in professional literature, these modern claims to originality are in the highest degree preposterous, absurd and ridiculous. It is recorded of the editor of a daily newspaper, yet in existence, that he once had the fifth chapter of Matthew's gospel imposed upon him as an original communication, and that was scarcely more absurd than the ridiculous originality to which these remarks refer.

In order to impress this subject, treated in my former essay on the bandage, upon the mind of the reader, and to pave the way to a proper understanding of the treatment of ulcers, which I design to commend, I present the following quotations from various authors on the use and value of the bandage:

Heister gives directions for discharging matter from ulcers, etc., and directs to dress with "digestive ointment spread upon lint, and secured upon the part with diachylon diapalma, or any other plaster of that kind, covering the whole with proper compresses and bandages." Gen. Sys. Surg., part i., p. 242.

"*Fistulous Cases.*"—"When the ulcer is cleansed, and the proper dressings applied, you must clap a small compress, or a slip of plaster doubled up in the form of a small compress, upon the part where you judge the fundus of the fistula to be seated, securing all with bolster, plaster, and bandage, as usual. In rolling up, the best method will be to place the beginning of the roller upon the fundus of the fistula, or at least to make the fastening tight upon that part: This will direct the contained

matter towards the opening, and the bottom will heal before the rest of the sinus." Ibid., p. 244.

Heister lays great stress on the importance of constitutional treatment, and says: "If internal remedies are not neglected, there is no doubt but that the very worst of ulcers may generally be cured." Ibid., p. 246.

"The surgeon's principal care in fractures, is to unite the broken bone, to which three things are necessary: 1. That the bone be restored to its natural situation, which is to be done by extending it and replacing it. 2. That after the bone has recovered its natural situation, it be kept there by giving it rest, and applying proper bandages. Lastly, 3. You are to use proper means to prevent, or remedy the disorders that usually attend this accident." Ibid., p. 108.

"When the fractured bones maintain their natural situation, you are under no necessity of extending or replacing the limb, but of applying a proper bandage."—Ibid., p. 108.

To preserve the portions of a fractured bone in proper position: "Two things are chiefly required to this end: 1. To bind it up properly; and, 2. To lay the limb in a convenient posture. The apparatus for securing the situation of the limb, is composed of bandages, bolsters, and splints, which are to be made of thick paper, or wood; or, if the surgeon shall think proper, of thin plates of copper, brass, steel, tin, or lead. But I think the best are those made of wood or paper. The manner of dressing the limb is as follows: In the first place, a roller is to be passed around the fractured limb; upon this are to be placed bolsters, and over these splints, which are to be secured by a tight bandage over all." Ibid., p. 110.

"It is no wonder, therefore, that fractures are ill cured, where the surgeon is ignorant of the proper methods of applying the bandage, or the patient is unruly, and will not give the limb proper rest." Ibid., p. 111.

"Although great numbers of surgeons, at this time, make it their constant practice, to apply a plaster to the fractured part of the limb before they make the bandage, yet the most prudent and skilful surgeons amongst the moderns entirely reject applications of this kind, as not only useless, but injurious to the patient, for these plasters can do no service without the bandage; but the bandage alone, if it is dexterously made, is sufficient to keep the limb firm; and the plaster carries this inconvenience with it, that it stops up the pores of the skin, and produces tumor and most violent itchings. For my own part, I am entirely of opinion, that all kinds of fractures may be very happily cured without the use of plasters; and I am confirmed in this opinion by long experience." Ibid., p. 111.

"Since the chief help seems to be expected from *bandages*, we should principally contrive, that besides having the general properties of a due length and breadth, they should also be accurately adapted to the shape of the broken limb."

"In order to keep the parts in their natural situation, the bandage should be made pretty firm; but if you tighten it too much, you will interrupt the circulation of the blood, and excite tumors, inflammation and gangrene.—On the other hand, if the bandage is made too loose, it will easily come off, and set the disunited parts at liberty; the middle way, therefore, is most eligible." Ibid., p. 111.

"When the bandage remains sufficiently tight, and no bad symptoms appear, you should not loose it till the fifth or eighth day, but where you have inflammations, tumors, pains, and violent itchings, or where the bandage is too loose or too tight, which is frequently the case, you must instantly take off the dressings and change them.—The second and third dressings must be performed in the same manner with the first, with this only difference, that

at the third dressing, if you perceive no tumor, you may make the bandage tighter than before, and by this means prevent the luxurious growth of the callus, which would occasion deformity." Ibid., p. 112.

"If, then, these swellings, and inflammations, and ulcers, be almost peculiar to the legs, and chiefly incident to those who, from their age, or sex. or accidental hurts, may reasonably be supposed to have less firmness either in the textures of their whole bodies, or of this particular part, it should seem a right practice to add an additional strength by bandages and strait stockings: and how safely this may be done, appears from the total vanishing of the tumor by a horizontal posture, without any apparent injury to the health," etc. Heberden's Commentaries, p. 88.

Heberden was born in 1710. The Commentaries were published in 1782.

In regard to the treatment of ulcers, "Enquirer" says: "It is somewhat remarkable, in the history of this subject, that the use of bandages, mentioned by Read, and particularly recommended by Wiseman, appears to have been almost wholly disregarded for many years, till the employment was again suggested by Ney Else, (Medical Obs. and Inq., vol. 4.) This gentleman accidentally observed the advantages of tight bandages, and he availed himself of them in their full extent," etc. Ed. Med. and Surg. Journal, vol. i., p. 188—1805.

"In the list of remedies, firm and well-applied bandages form one of the most important. By compressing the superficial vessels, they render the circulation less languid; and by the support which they give to the muscles and soft parts, they admit of the limbs being often moved without inconvenience; they keep the granulations from rising above the surface, and they dispose the skinning process to take place, by promoting the absorption of neighboring parts; they not only invigorate by general

compression, but by the warmth which they retain, and serve for a defence to the new formed parts." Ibid., p. 192. After discussing the relative value of the litharge plaster of Mr. Baynton, the flannel roller, etc., he says:

"Rollers made of strong linen, or calico, appear better adapted for common use."

Henderson says, after speaking of various local applications required by certain circumstances: "and, above all, a flannel roller, properly applied, so as to enable the patient to make use of sufficient exercise, were of great service." Duncan's Commentaries, 1788, vol. iii., p. 297.

I again urge upon the readers of these essays on the bandage, the great necessity they are under to study the whole subject. No amount of study will enable them to know too much, no amount of practice in the application of the bandage will make them more skillful than they should be in its use.

In 1753 the fifth edition of Heister's works was published in England. It was filled with useful instruction on the whole subject of the bandage. From these valuable works, Underwood caught his inspiration on the subject, and his lessons, on the application of the bandage to ulcers, were instructive in an eminent degree. Benjamin Bell followed in the good work, and Mr. Baynton made his useful suggestions on the treatment of ulcers, in 1799. The quotations made above show the estimate placed upon the bandage by those who are considered authorities, and their testimony is entitled to great weight.

The medical profession is deeply indepted to Dr. Baynton for correct views in the treatment of ulcers. He has been sometimes disparaged by "distressed critics," but I doubt whether there has been any material improvement made upon his treatment of the generality of ulcers. In the Medical Gazette, of January 8, 1841, Mr. Joseph Bell, of Barhead, England, reports twelve admirable cases to show the efficiency of Mr. Baynton's method of

treating ulcers. A distinguished English medical writer, in refering to them, acknowledges the truth of a suggestion made in a preceding part of this essay. He says: "There is no doubt that the practice is excellent; but the troublesome attention which it constantly requires must always be an impediment to its general and continued use." This is certainly a strange objection to urge against an "excellent practice!"

Mr. Bell, in connection with his twelve cases, says: "To explain at any length the method of this celebrated surgeon (Dr. Baynton) may seem to some superfluous. It is, however, my decided conviction that the majority of practitioners are either ignorant of it, or do not put it into practice. Dr. Hannay, of Glasgow, is the only medical man that I either have seen using it, or heard recommending its employment."

"Baynton's system consists of three parts: first, straps of adhesive plaster, from two to three inches broad, and of sufficient length to surround the limb, and to overlap a few inches. These straps are to be applied by placing the center of the strap exactly opposite the ulcer, over which the free ends are to be crossed, pulling them as tight as the feelings of the patient will permit. The first strap is to be placed a little below the lower margin of the sore; the second is to overlap it a little; the third to overlap the second a little; and so on until the ulcer is completely covered; a soft piece of cloth is then to be placed over the ulcer; but I frequently dispense with this. Secondly, a bandage is to be applied, from the extremity of the limb to the articulation above the sore. Thirdly, this bandage is to be kept constantly wet with cold water. The dressing to be changed every day, or every second day, according to the quantity of discharge and irritability of the ulcer. Such, then, is the Bayntonian system, which, when properly applied, is competent to cure, speedily and effectually, the irritable or inflamed, and the va-

ricose, as well as the indolent or callous ulcer; proper attention, of course, being paid to the improvement of the general health—a *sine qua non* in every plan of treatment."

"In the absence of all practical experience on the matter, the system strikes us as admirably suited for 'irritable ulcers,' which differ chiefly from those of an indolent nature in an inflammatory state of the integuments, with infiltration into the adjoining cellular substance. No better means can be employed to remove these conditions than the bandage and cold water. The pressure removes the inflammation, empties and supports the overloaded and enfeebled capillaries. The cold water is a powerful agent in the removal of the cutaneous inflammation; by decreasing the high temperature of the part, it produces a sedative effect. But these are not the only benefits derived from the bandage and water; they also act as stimulants to the ulcer, and thus establish a new and healthy action in the sore, which is at the same time kept constantly clean. I humbly submit, if this be not as rational a plan to remove the inflammatory condition which surrounds these ulcers, as either leeching or poulticing; and then it has the very great advantage, that the patient can walk about during the time the sore is healing."

I cannot imagine how there can be two opinions on the proper treatment of ulcers. The fact, universally noticed, that the superficial veins of the leg, for want of support are most prone to ulcerative action; while the deep seated vessels, supported by the controlling presence of the muscles, are not liable to that form of inflammation, indubitably points to the necessity of support for the superficial or exposed veins. That support is found in the roller, and its powers may be modified so as to suit almost every condition of ulcerative action. For this reason I have not considered it necessary to be minute or specific in a description of the ulcers, because it is safe to assume

that those who have capacity to treat ulcers with the bandage, will have the ability to discriminate the varying conditions of the ulcer, and to modify the use of the roller to suit the different stages of the disease. To illustrate this point, I call attention to a statement made by Mr. Bell, in the quotation made above from his paper. In describing the Bayntonian method of cure, he says: "Thirdly, this bandage is to be kept constantly wet with cold water." This is two sweeping a remark, and would land a mere routinist in a great deal of trouble. There are ulcers that do not need cold water, there are others that require a great deal; some do best with the bandage perfectly dry, others with a slight dampening. And all these conditions may be found in the varying stages of the same ulcer. This illustration shows the necessity of being guided by principle in the use of the bandage, as well as in all other forms of treatment, and may teach the value of a thorough study of the various powers ascribed to the bandage.

I cordially subscribe to the eulogium bestowed by Mr. Bell, on Mr. Baynton's treatment of ulcers. He is occasionally criticised by hobby-riders, but to his practical abilities the profession owes nearly all it knows on the proper treatment of ulcers. His plan is certainly susceptible of some improvement, but he paved the way for the correct appreciation of well regulated mechanical support in the treatment of ulcers.

An objection is sometimes urged to the encircling of the limb with the adhesive plaster; it is said that this acts as a ligature, and may injure the ulcer instead of benefitting it. It seems to me, however, that such results must be from the abuse of the remedies, rather than their proper use. I have not seen anything but benefit from Mr. Baynton's method of treatment, and I have had a long and extensive experience with it. If the proper use of Mr. Baynton's means of cure were open to the objection

referred to, it would be singular that the evil effects should not have attracted the attention of the great numbers of surgical writers who have commended Mr. Baynton's method. Mr. Critchett admits that Sir Benjamin Brodie, Liston, Ferguson, Syme, Miller, Chelius, Cooper, Rust, Blandin in the French "Dictionary of Medicine and Surgery," and many others, echo "Baynton's plan," but he thinks their commentaries show some dubiety as to its value. The fact, however, that they relied on the treatment, suggested by Mr. Baynton, shows that they recognised it as the most valuable in their possession. If the "Bayntonian method" were capable, *per se*, of inflicting the injuries referred to by Mr. Critchett, should not something have been heard of them in the twelve cases reported by Mr. Bell, in the "London Medical Gazette?"

Having thus introduced the principle of treatment, laid down in Mr. Baynton's treatise, in 1799, it may not be improper to glance at some of the other forms of treatment, that have been zealously commended.

In Charing-Cross Hospital, London, ulcers are treated with oil of turpentine, administered internally. Mr. Barber, M. R. C. S. E. of Colsterworth has great confidence in the application of common vinegar, by bathing, and the use of lint dipped in vinegar, applied over the ulcer, *and the bandage applied in the usual way.*

Mr. Spry is favorable to the use of Balsam of Peru. Lint is soaked in it, placed upon the ulcer, oiled silk is placed over it, *and a well applied roller over the whole.*

Mr. Chapman says: "After dressing the sore with a compress of wet lint, before the bandage is put on, I encircle the part of the limb on which the ulcer is situated with from three to six, or more, moistened strips of linen or calico, of the same length and breadth as the straps employed by Baynton, drawn tightly, and crossed in precisely the same manner as the adhesive plaster. These wet strips adhere to the skin as closely and smoothly as

the strapping; and as each one overlaps the upper third, or half, of that previously applied, they afford an amount of support, or compression, very little, if at all, inferior to it. Over this peculiarity of the water dressing, Mr. Chapman uses the bandage. Of the water dressing, and Mr. Macartney's connection with it, I shall have more to say when I come to the treatment I shall commend for ulcers.

"Dr. Jones, M. R. C. S., paints half an inch around the sore with a strong solution of nitrate of silver, and dresses the sore itself with chalk ointment, spread on lint, and three or four inches above and below, with plaster spread on linen, (composed of equal parts of strong mercurial ointment, yellow wax, and soap cerate, with the addition of one drachm of camphor to each ounce of the compound,) and binds the leg from the toe to the knee with wet cotton bandages, the dressing not to be changed more than once a week. In this way Dr. Jones cured his patients in about two months."

But these specimens of illustrations of the multitudinous methods adopted by surgeons, in the treatment of ulcers, must suffice. The variety is not exhausted, but the space that can be devoted to it is, and I must pass to an examination of some of the recent works on this subject. It is certainly a desirable thing that the profession should agree upon some settled principles of treatment for these affections. Mr. Wakley says, with great truth: "Of no disease does a medical practitioner undertake the management more hopeless of benefit, than a 'bad leg.' Viewed in any light, the malady is associated, in his mind, with tediousness, perpetual trouble, and, in the majority of cases, with unsatisfactory results. This is evidently the consequence of unsettled methods of treatment. The hap-hazard system of practice has had full play in the management of these diseases; for every practitioner has his own mode of treatment, and every nostrum has its day of popularity, only to be thrown aside and replaced

by another, the fame of which becomes equally ephemeral. It is not, therefore, surprising that the quacks enjoy so large a share of this kind of practice. John Bell might well say, 'it is impossible to be serious while we enumerate the thousand remedies which have been recommended for ulcers.'"

The disposition which is often manifested by medical men, to hunt up and nurse a little bantling, which they call originality, has been the bane of the profession.—They scorn to be "as other men;" their predominant idea of professional excellence is not connected with the welfare of their patients, but with self-laudation, and they rejoice in making, or claiming changes in the works of experience and observation. This paltry aspiration is the cause of the unsettled condition of many points in the treatment of disease. In tracing this state of things, through various works, I have, however, been forcibly impressed by one prominent fact—in nearly every one of the plans of treatment for ulcers, the bandage plays a conspicuous part, and to its presence, in many of the "plans," is due all the success claimed for some of the adjuncts.

Mr. Walker, who published a treatise, in 1848, on the cure of ulcers by fumigation is, however, an exception to the remark. He dispenses with the bandage, and zealously urges a system of fumigation, with iodine and sulphur. He says his system is very simple, and, by way of illustrating the fact, he remarks that "he has a series of mahogany boxes, having in the cover of each a round aperture for the reception of the limb. Each box communicates below with the engine room of my establishment, whence heated air or warm vapor can be passed into the apparatus. On the bottom of the box is placed a heated iron, and on the latter the powder of iodine and sulphur, which is volatilized by heat." The excessive simplicity of this apparatus must appeal to the general

practitioner with more than ordinary force! And if he looks to Mr. Walker's details, and examines the delicate shades of discrimination that have to be adapted to each individual case, he must, if he adopts the treatment, make up his mind to spend his whole professional life, in the treatment of ulcers exclusively. Nothing short of incessant practice could make him an expert operator under Mr. Walker's rules, and no expertness under them could ever make amends for dispensing with the bandage. That agent should be regarded as a *sine qua non* in the treatment of ulcers, no matter what other means are resorted to. What form of pathology that can be that looks to any local application to an ulcer, without the bandage, as a successful treatment, transcends any conception I have of the subject. Mr. Critchett remarks very justly, in allusion to the thousands of vegetable and mineral specifics that are commended, "no application to the wound can ever get rid of the surrounding congestion and morbid deposit, upon which the ulceration depends, and to which it owes its continuance."—There is nothing that can perform the offices of the bandage in the treatment, not only of ulcers, but of many affections that are kindred to ulceration, but which are not usually called by that name. It is the oldest of remedies for such disorders; from the days of Hippocrates and Galen, down to the present, through all the varying schools that have lived and perished, through all the wild, fanciful and chimerical systems and theories that have been in vogue, as well as among the most truthful and observant of sects, the bandage has steadily maintained its position, as, at once, not only the most useful and valuable of all agents for its purposes, but the one of all others, capable of the most general and extensive use. The highest authorities in all ages of medicine have constantly endeavored to bear testimony to its great qualities, and many of the old surgeons had as clear and extended views

of its multiform capacity for a great variety of surgical purposes, as any of the most enlightened among the moderns. Why should there, then, be any hesitation about the use of a remedy thus commended? If the accumulated experience of many centuries is of any service, why seek to deviate from that plain path that is studded with monuments of success, and that has all the leading lights of the medical profession playing upon it?

I think that for the most useful adjunct to the mechanical pressure and support of the bandage, in the treatment of various inflammations, the profession is mainly indebted to the invaluable labors of Dr. Macartney, of Dublin. That experienced and excellent surgeon, in his lectures, in the University of Dublin, enforced with great eloquence and power, from the year 1819 to 1836, the uses of the water dressing, and when the bandage and the water dressing are combined in the treatment of inflammations, it is scarcely possible to imagine a want that surgeons can feel in the treatment of those diseases to which either is applicable. But it must be borne in mind that the use of these agents requires judgment; that what is useful in some stages, is not so in all, and that modified conditions of the disease, require modified uses, both of the bandage and of the water dressing. In commenting upon the remark of Mr. Bell, in a former part of this paper, on the subject of "keeping the bandage constantly wet with cold water," I stated that I would recur to this subject again.

If a loose statement of the kind quoted from Mr. Bell, were rigidly followed out in the treatment of ulcers, it would show what could be done, by the abuse of a good remedy. On this point, I prefer using the observations of Mr. Critchett, rather than any of my own. Of the "water dressing," Mr. C. says: "I have tried it extensively; it has the advantages of cleanliness, economy, and simplicity, and is certainly an immense improvement up-

on the complicated unguents of former days; but it is desirable, if possible, to get at its real value. It answers remarkably well in the transition stage from the sub-acute to the chronic ulcer; but there comes a time when the surface of the sore is either raised or flabby, as in cases where it is combined with entire rest, or becomes dry, and makes no progress towards healing. In either case it has done its work, and some other application must be substituted."

It may be asked, what is the value of various other commendations; such, for instance, as the application of steam to indolent ulcers, so strongly urged by Dr. Macartney. The only answer that I can give to all such queries is, that beyond the adhesive strips, the cold water dressing, and the bandage, I have never found occasion for the use of any local application; in a considerable experience, I have found no form of ulceration that did not yield readily to this treatment—so readily and so well, indeed, that it has hitherto proved unnecessary to seek other agents.

There are reasons, already suggested, for the neglect of these agents in the class of disorders for which they are useful—and they are the labor, and loss of time imposed upon the surgeon. This is an indifferent excuse; and there is another, perhaps, which few would like to acknowledge—the want of skill in the use of the bandage. In relation to the first reasons, I think the supposed economy of labor and time used in ordering poultices, balsams, unguents, &c., compared with that gained in the use of the bandage, is a waste—one involves not a little labor and loss of time, to physician and patient, scattered over a long period; the other involves labor and loss of time within a narrow space, and the patient gains as a consequence of the latter. For, in addition to all the other elements of usefulness that have been allotted to the bandage by the eminent and experienced surgeons of

all ages, the practitioner should regard as not the least of its prominent merits, that the patient can take exercise, in many forms of ulceration, and attend to business without materially interfering with the progress of the cure. The value of this consideration is almost inestimable, and it brings up, in its proper place, an investigation of Mr. Critchett's proposed modifications of the Bayntonian treatment of ulcers.

I have already expressed my admiration of Mr. Critchett's very excellent treatise on ulceration. The general character of its principles, the soundness and clearness of its pathological views, and the correctness and fulness of many of the original suggestions, constitute Mr. C.'s brochure on ulcers, one of the very best in the English language. It is a source of regret that in the midst of so much that is deserving the warmest and strongest commendation, there should be anything that calls for a different course. But I am persuaded that in proportion to the departure of Mr. Critchett from the general spirit of the Bayntonian local treatment, in that proportion has he detracted from the merits of his work. I have already questioned the value of Mr. C.'s animadversions upon Mr. Baynton's peculiar use of the adhesive strips, and have expressed the opinion that the objections were more plausible on paper than real in practice. As an improvement upon Mr. Baynton's method, Mr. Critchett recommends that unglazed calico be spread with the simple emp. plumbi of the Pharmacopia, free from resin. The calico, thus prepared, is to be cut into strips two inches broad, and from twelve to eighteen inches long, according to the size of the limb. These pieces are to be warmed, and placed around the limb, from the toes upwards, somewhat in the style of Scultetus's bandage. In applying the adhesive strip, Mr. C. thinks that the strip should be applied at its middle, and worked around the limb smoothly, until the ends are made to cross each oth-

er. These are carried, in this way, from the toes, up the limb to the knee, or even above it in some instances. After the limb is thus enveloped, a calico bandage is to be applied, in order to keep the strips, or straps, as Mr. Critchett calls them, in their place.

That there are conditions of the limbs that would be benefitted by this course, I have no kind of doubt; but as a general application, I more than doubt the value of this practice. Notwithstanding Mr. Critchett's opinion to the contrary, it is difficult to imagine that this course will permit a man to pursue his ordinary avocations. Even the moveable turns of the bandage, and the soft, flexible character of its material, do not always, under all circumstances, permit a man to use his limb freely; what must be the additional constraint, when the whole limb is shingled with adhesive plaster, kept to its place by a bandage? And, as repeated applications of cold water, or alcohol and water are essential to the comfort of the patient, under the influence of the bandage, and contribute largely to his rapid recovery, I think in this fact, a reason is found for the rejection of Mr. Critchett's adhesive mechanical support, that far outweighs every possible advantage that any one can conceive it to possess.

Ulcers about the malleolus, or tendo Achilles, when intractable, may be benefitted by Mr. Critchett's plan, but it would not in this case be necessary to carry the straps far up the ankle. Ulcers in all other parts of the leg may be safely entrusted to the combined principles of Mr. Baynton and Dr. Macartney. I have seen all the forms of ulcers that have been described, belonging to the leg, and I have never had any reason to look to any other method of cure, than that comprised in the various modifications of the adhesive strips and bandage of Mr. Baynton, and the water-dressing of Dr. Macartney. But, in any case requiring the extensive use of strips, suggested by Mr. Critchett, I should prefer the plan of Mr. Chap-

man, referred to in a former part of this paper—the use of wet strips of calico, applied in the way that Mr. Critchett uses his adhesive strips.

Those who may wish to practise the use of the bandage in the cure of disease, must not forget the warnings given in my former paper on this subject. As an encouragement to them to enter upon the study and practice of the bandage, I beg leave to quote the language of Mr. Critchett, in reference to giving mechanical support to a diseased limb: "With regard to the time and labor necessary for the acquisition of a fair amount of dexterity, I admit that it demands some practice and perseverance, and some courage, not to be daunted by early failures; but I can assure my young friends, from personal experience, that it is worth some pains; that practice makes each successive application more easy and rapid; and that when once they have triumphed over the difficulties, they will be most amply rewarded by the success that will attend their labors, and that, too, in a field where the 'harvest is plenteous and the laborers are few.'"

But there are other considerations in the treatment of ulcers. Invaluable as the local treatment is, as first suggested by Mr. Baynton, there are but few forms of ulceration that do not also require some attention to the constitutional treatment of the patients. The chylopoietic organs require examination, and when disordered, as they generally are, they must be regulated by suitable medicines, and an appropriate diet. The specific ulcers—the strumous, syphilitic, phagedenic, menstrual and malignant—require constitutional treatment, but they all derive great benefit from the local means recommended in this essay, for the simple ulcer. I know of no ulcers, except such as are connected with diseased conditions of the bone, that cannot be cured effectually by the proper use of the means commended in this essay. There are uses of the "water-dressing," but let it not be for-

gotten that there are also abuses of it; there are uses of the bandage, but it too may be abused. A knowledge of the pathology of ulcers, with skill and judgment in the use of the bandage, water-dressing and adhesive strips, will secure a successful treatment of ulcerations, if the constitution is attended to.

It may not be amiss to refer here to the suggestions of Sir Benjamin Brodie, on the dressing of diseased legs — He says: "When you apply the plaster, it should always be with the heel raised, the patient lying flat on his back, so that the vessels of the leg may be emptied of their blood. The same plan should be adopted when the plaster is taken off. If the leg be hanging down at the time the plaster is applied, the veins are full of blood, and the plaster becomes too loose as soon as the patient puts his leg up."

The removal and renewal of the dressings must be regulated by the nature of the case, for no general rule can be given. Where the bandage is used for the double object of mechanical pressure and water-dressing, it should be renewed often, and, speaking from personal experience, I know of nothing more grateful in some forms of inflammation, than the frequent renewal, in the course of the twenty-four hours, of the wet bandage. Sometimes the bandage may remain a week.

There is one other point on which I consider it important to speak, before passing to other matters. I allude to the fear, often expressed, of healing up old ulcers.— That there are circumstances that justify this fear, I have no doubt, but I think the principle is applied too extensively, and often injuriously. I feel glad to find that the experience I have had in the healing of old ulcers is confirmed by the observations of Mr. Critchett. He remarks: "How far is it desirable or safe, in reference to the general health of the patient, to heal ulcers of the leg, more particularly when of long standing? Extensive opportunities of observing cases that have been ra-

pidly healed, and that after having existed for many years —have convinced me that the dangers of healing old ulcers have been very much exaggerated by the old surgeons."

I am well aware that the subject of the treatment of ulceration has not been exhausted in this essay, but think enough has been said to fix the attention of the reader upon the bandage as the prime agent for repairing the destructive effects of ulceration.

There are other forms of formidable disease, in which the bandage exerts a most happy influence, and to one or two of them, I wish to call attention. The first is that serious inflammation called

Anthrax, or Carbuncle.—Almost the constant and uniform language of surgical writers on this disease gives rise to the impression that a considerable sloughing of the cellular tissue is as certain a symptom, as the calorific feeling from which the disease derives its name. Sir. Benjamin Brodie, Samuel Cooper, Bromfield, the Dict. des Sciences Med., Physick, Gibson, and others describe a sloughing process as a certain feature of carbuncle. Dr. Gibson ascribes great credit to Dr. Physick for having pointed out the proper time for the application of caustic. The usual treatment is by emollient poultices until openings are made, and then the cautery is to be used at once. This destructive process, of course, greatly protracts the sufferings of the patients, and adds to the seriousness of the case. After the slough has come away, granulations must form, and much time must elapse before the reparative process can be completed.—Are these things necessary? Is sloughing of the cellular tissue an essential feature of carbuncle? Must the cautery be always used in the cure of anthrax? Is it necessary that a patient shall suffer for months with a carbuncle? I am well prepared to answer all these questions in the negative.

In my former paper on the bandage, I stated that there were certain conditions of diseased action that were considered essential pathological phenomena of those diseases, but which were due entirely to the treatment they received, because while present under one form of management, they were altogether unknown in other forms. The remarks I have made on the pathology of anthrax, and the detail of my own case will illustrate the truth of the statement I have just alluded to.

In January, of this year, a small red pimple appeared on my right hand, late in the evening. It was looked upon as too simple a thing to need attention, although it had pain enough in it to keep up a reminiscence of its presence. On the next morning, it had assumed a formidable appearance. There was a considerable tumefaction, embracing that portion of the hand extending from the third joints of the little finger and the one next to it, up to the wrist joint. The skin was hard and brawny, and of a dark crimson color, especially at the centre of the induration. The burning sensation was as severe as though the hand had been dipped in molten lead, the pain was beyond anything I had ever endured, and there was a sense of excessive weight in the hand, constriction, and a stiffness that entirely prevented any useful movements of the fingers.

I had let the time pass for the use of the bandage, for the suffering soon became so great that pressure could not be endured. My general health, which was perfect, apparently, up to the appearance of the anthrax, began to suffer seriously. I was attacked with violent fever, headache, loss of appetite, and was unable to sleep. I resorted to rigid dieting, and the use of the emollient poultice, renewed every two or three hours. In the course of a few days of incessant and extreme suffering, I felt a fluctuation, but the agony of the hand was so intense, that I had to use chloroform locally to deaden the

exalted sensibility, in order to use the lancet. I at length plunged a lancet to the bottom of the abscess, and made a large opening in it, but it discharged nothing but a sanious fluid. The pain extended up the arm, and a large, indurated gland, on the inner edge of the deltoid muscle, and another in the axilla, gave painful evidence that the evil influences of the anthrax were radiating towards the chest.

I reapplied, very foolishly, the emollient poultice, and wore it through the afternoon. At eleven o'clock at night, feeling suspicious of great evil, I removed the poultice, and realized my worst fears. The skin was rapidly passing into the first stages of mortification, and more than half of the outer part of the hand, from the second joints of the fingers already spoken of, up to a short space above the wrist joint, was so livid in its appearance, and of such a deep purple, that I scarcely dared to hope that anything could stop the extensive sloughing. I immediately prepared a number of strips of cotton for the fingers, and broader ones for the hand and arm, wet them with cold water, rolled them, enveloped each finger and the thumb in a tight bandage, and then put a very tight one on the hand. I felt immediate relief from my suffering, and, for the first time in five nights, slept soundly. On removing the bandage from the hand, the next day, to tighten it, I found an entire change in the carbuncle. The mortification of the skin was checked, the threatened sloughing of the cellular tissue was gone, and the carbuncle was secreting a copious yellow, thick pus. I continued to use water-dressing and the bandage, and in the course of a few weeks, the hand was entirely cured, without the slightest sloughing of the cellular tissue, and without the use of cautery. Instead of months of suffering, and a long and tedious reparative process by granulation, I recovered from this formidable anthrax in a remarkably short space of time, and with

comparatively little suffering. I give this case as an illustration of the value of the bandage; I could detail other cases, in which its power was equally conspicuous.

Phlebitis of the Humeral Vein.—A few years ago, Mr. Charles Kastenbine was attacked with a formidable phlebitis, at the bend of the arm, several days after being bled. I found his arm swollen greatly, up to the shoulder, with violent constitutional derangement. There was severe and constant vomiting, great agitation of the system, and the palpable evidences of the rapid approach of the phlebitis towards the region of the heart. Each finger was enveloped in a narrow bandage, and a wet roller was passed from the hand up to the wound of the arm. A compress, made of calico rolled tightly, was laid along the inflamed vein, up towards the axilla, and the roller was carried over this compress.

In the course of from two to three hours, the relief was manifest. The constitutional disturbance ceased, and all the dangerous symptoms disappeared. The bandage was removed next day, and a large quantity of thick, yellow pus was discharged from the wound in the arm. The bandage and compress were renewed, and in the course of two days more, the use of the arm was perfectly restored.

I cannot dwell with much minuteness upon the remainder of the affections that derive more benefit from the bandage, than from all other remedies. In my former paper on this subject, I referred to the immense superiority of the bandage over every other agent for injuries, and some of the diseases of the joints. Its merits will be conspicuous to all who may try its use in such cases. In wounds of the joints, sprains, dislocations, &c., its benefits are of the highest character. Fistulous abscesses, which have long resisted every other form of treatment, seem to feel the happy influences of mechanical pressure almost from the moment of its use. Contusions,

and lacerated wounds, of the severest character, that hold out hope of restoration under any treatment, will more certainly, speedily, and completely recover under mechanical pressure than under any other treatment; on these points I speak from a long experience, and from many comparisons of the bandage treatment, with other means. And I feel sure, that in proper dressings of varicose veins with the bandage, will be found the only certain cure of that affection.

I intended to pursue this subject, and enforce the use of the bandage in the treatment of gun-shot wounds, but that subject has been so well handled by the able and philosophical correspondent of this Journal, who writes over the signature of "C.," and the general principle of the treatment, and the usefulness of the bandage for gun-shot wounds, have been so frequently pointed out in my former essay on this subject, that I do not feel that it is necessary to say any more on the subject.

But I hope I may be indulged in the confident expression of the belief, founded on long and well observed testimony, that a careful study of the bandage is worthy the attention of all medical men; and I feel persuaded that he who is without the knowledge of its great capacity and powers, is without the possession of one of the most important elements of success in surgery.

REVIEWS.

Art. III.—*A Universal Formulary: containing the methods of preparing and administering officinal and other medicines. The whole adapted to physicians and pharmaceutists.* By R. Egleseld Griffith, M. D. Philadelphia: Lea & Blanchard. 1850.

This work is appropriately dedicated to Professors Wood and Bache, authors of the "Dispensatory of the United States of America." The labors of these gentlemen deserve all the respect and kindness that physicians can bestow on them, and Dr. Griffith has shown the possession of proper feeling, in this tribute to Drs. Wood & Bache.

We are not altogether confident that an increase of formularies is calculated to increase the armory of the physician, for the management of diseases. He is not the most useful in wealth, who has the most money; he that dispenses his means best, even if they are limited, is the best citizen. And that man's knowledge is most beneficial, that is used to the best advantage. Crowded formularies are apt to produce a jostling, and in the struggle to stand, it is possible that the worst may retain their feet. A formulary of mere recipes is not calculated to make thinkers; it does not materially aid the judgment, and may sometimes run away with the understanding.—The American practitioner has long been familiar with Ellis's Formulary, and it finds a place in almost every medical library, yet it would be difficult to say in what its special merits consist. Mayne's Dispensatory and Therapeutical Remembrancer," professed to contain "the entire lists of materia medica, preparations and compounds,

with a full and distinct version of every practical formula, as authorized by the London, Edinburgh, and Dublin Royal College of Physicians in the latest editions of their several pharmacopœias," and the American edition, edited by the author of the "Universal Formulary," before us, was "revised, with the addition of the formulæ of the United States Pharmacopœia"? It seems to us that a work thus copious, did not stand much in need of a successor at present. The work of Mayne had a great many excellent features in it, and Dr. Griffith said it gave a clear and comprehensive view of all the officinal preparations directed by the authorities referred to." What created the demand for another work of this kind we do not know.

But though we are not convinced that this "Universal Formulary" was an absolute necessity, we are far from wishing to depreciate Dr. Griffith's work. He has bestowed a large amount of labor upon it, and every department of the book bears witness to the extended research and untiring industry of the author. That there is no ordinary share of useless lumber in the work is very certain, but there is also a great deal of matter that is very useful.

The formulary is preceded by an introduction, which "contains tables and observations on the weights and measures employed for pharmaceutical purposes in the United States and in foreign countries, and an explanation or vocabulary of the principal abbreviations and Latin terms used by physicians in writing prescriptions, followed by observations on the management of the sick room, with rules for the administration of the different classes of medicines."

"The formulary is arranged alphabetically, according to the pharmaceutic names adopted in the United States Pharmacopœia; but in each formula, the English appellations for the articles comprising it are used, and the

quantities of these ingredients are expressed in words, and not in the usual pharmaceutic signs."

We consider the Introduction to the Formulæ one of the most valuable portions of this work. There is a reasonable portion of useful knowledge in it, compressed in a small space, and it is a kind of knowledge, in which practitioners are most likely to be defective. The remarks on the management of the rooms of the sick, though not an improvement upon Thomson's excellent work, are valuable to those who do not possess that work, and there are some useful suggestions on the proper administration of medicines.

Dr. Griffith says: "To facilitate a reference to the contents of the work, copious indices have been added, not only of the formulæ, but of the diseases for which they have been advised." Alas, the means for all the reference required by many, were too facile without the reflex indices! It is a railroad transit by the express train, and the locomotive will often fly from the track. For instance, under the name of ulcers, we have fifty-four distinct applications advised, when, if the experience and observation of the best surgeons of various epochs are to be relied on, not one of the fifty-four is useful or necessary.—Under the head of venereal ulcers, we have eight different applications, and among them is the following, purporting to be the recipe of an Italian physician, of no ordinary celebrity:

℞. Round brithwort,
Long brithwort,
Orris root, each half an ounce,
Opopanax,
Sagapenum, each two drachms,
Guiacum, four scruples,
Cloves, two drachms,
Camphor, three drachms,
Alcohol, ten ounces.

Macerate for twenty-four hours, and filter.

Our cotemporary, the Philadelphia Medical Examiner, "pleads to consummate ignorance in regard to the principles of combination, if any such there be, that suggested this formula," and we join in the plea. On what principle would a man employ this opopanax tincture? What condition of venereal ulcer would require its application? What are the principles of its action? We candidly acknowledge we know nothing on the subject. But we may take this very instance to show the evil tendencies of volumes of recipes. A practitioner wants a labor-saving machine to enable him to get along without thought. He takes Griffith's formulary, and is soon called upon to take charge of a venereal ulcer. Its peculiar condition, and the age, temperament, habits, mode of living, &c., of the patient, which he has to think of, are thrown aside, as unimportant matters; the important thing is that Griffith 's formulary has eight applications for such ulcers, and the heedless, idle, unthinking routinist, in accordance with the instincts of such persons, hopes a great deal from each of them. He is very regular, and commences with the mercurial ointment. After trying that awhile, and fruitlessly, he goes to the next in the list—the lotion corrosive sublimate; then to the yellow wash; the ointment cyanide of mercury; ointment of the red iodide of mercury, black wash, compound tincture of opopanax, and winds up with a plaster biniodide potass. and opium, about which time, probably, the patient winds up the prescriber. A worse aid to the proper study of practical medicine, than a book of recipes, does not exist. Those who lean on such things for a staff, soon come to the want of crutches, and we might as reasonably expect high attainments, in the skilful treatment of disease, to show themselves in a man constantly in the habit of cutting "cures" from the columns of newspapers, as in one who consults a book of formulæ in order to aid his prescribing powers. This is not the proper method for the

study of medicine; a fatal objection to it is found in the fact that it loses sight of the age, sex, temperament, habits, &c , of the patient, and leads men to prescribe for names of disease, instead of the symptoms. The practitioner, who is properly alive to his duties and responsibilities, will never content himself with practices of this kind; he will survey all that must be known of the case, in order to make up a judgment upon it, and physicians of this kind generally have knowledge enough of pharmacy and therapeutics, to prescribe, without resorting to the drilled matters of a formulary. The consequence is, that these books can do no great deal of good for those who could use them with judgment, but may do much harm in the hands of those who are unfit to prescribe either with or without the formulary. In the multitude of prescriptions for the same disease, some of which may be salutary in some circumstances, and baleful in others, a routinist may never strike the right one, except by the merest accident. We earnestly wish that some scientific Bailey could be found, of the capacity of the one appointed to stop the importation of adulterated drugs, who would superintend the "customs" of formularies, and restrain their contents within reasonable and salutary bounds.

But though we thus feel on the subject of formularies, we are not unmindful of certain merits in Dr. Griffith's work. We cordially join in the commendation of the "Medical Examiner," on the following points: "A large amount of useful and selected matters, well arranged, with the original observations of the author interlarded, is made to precede and follow the formulary proper:—among these are the subject of weights and measures, domestic and foreign; specific gravity; temperatures; vocabulary of words employed in prescriptions; observations on the management of the sick room; doses of medicines; rules for the administration of medicines; management of

convalescence and relapses; dietetic preparations; list of incompatibles; posological table; officinal preparations and directions; bloodletting; poisons; index of diseases and their remedies, &c., &c."

The portions of Dr. Griffith's work, which treat of these subjects are really valuable, and are worthy of attention. They may be consulted with advantage by those who will feel no inclination to resort to the formulary, and if that part of the work were a sealed volume, the remainder of it may be considered a valuable contribution to practical medicine. It is very greatly in advance of all its competitors, and is worthy of confidence and use in the portions we have commended.

This work consists of 567 pages; it is well printed and substantially bound, and is quite free from the blemishes of typographical blunders. It may be purchased at the bookstore of Beckwith & Morton.

ART. IV.—*The Annual of Scientific Discovery; or, Year Book of Facts in Science and Art*—Exhibiting the most important discoveries and improvements in mechanics, useful arts, natural philosophy, chemistry, astronomy, meteorology, zoology, botany, mineralogy, geology, geography, antiquities. Together with a list of recent scientific publications; a classified list of patents; obituaries of eminent scientific men; an index of important papers in scientific journals, reports, etc. Edited by DAVID WELLS, of the Lawrence Scientific School, Cambridge, and GEORGE BLISS, Jr. Boston: Gould, Kendall & Lincoln. 1850.

We had so little space to speak of this work in our April number, that we feel it incumbent on us to renew the subject this month. This is the first number of a work that is destined to be of the greatest utility to scientific men, and we hope that every lover of science, throughout the country, will feel it his duty to encourage

the editors to persevere in the good work they have begun.

The editors say: "The idea of preparing the present work was first suggested by the examination of similar works, which have been published in Europe for several years past. We believed that such a work could not fail to be useful to many persons, by enabling them to see at a glance, what has been accomplished during the past year, and thus showing them in what direction they can most profitably apply their labors. The language of Bacon, concerning one branch of science, applies with equal force to all its branches:—'Nothing is of greater efficacy in procuring a stock of new and useful inventions, than to have the experiments of numerous mechanic arts known to a single person or to a few, who might mutually improve each other by conversation; so that by this translation of experiments, arts might mutually warm and light up each other, as it were, by an intermingling of rays.'

"In the preparation of the Annual, nothing has been inserted except upon good authority. While many of the articles have not been previously in print, many others have been furnished directly to us by their authors, but have also been published elsewhere. In the exercise of a proper discretion, we have rejected some articles which it would, perhaps, have been well to retain; but the limits assigned to the work compelled us to omit much that we at first intended to include. We have, however, inserted nearly all that is at once new and important, which is to be found in the standard and scientific publications of America, Great Britain, France, and Germany."

In carrying out these purposes, we think the editors have shown great judiciousness in what they have retained, and we hope they have omitted nothing, connected with the design of the work, of any importance. From

a careful examination of the contents, we are impressed with the belief that the work is very complete. We select a few specimens of matters, of interest to medical men.

"*American Microscopes.*—Mr. Spencer, of Western New York, has hitherto been almost the only person in this country who has turned his attention to the manufacture of microscopes, and he has succeeded in producing some instruments of great power and excellence. Most of those, however, at present in use in this country are of foreign construction. About a year since, Mr. J. B. Allen, of Springfield, Mass., having had his attention called to the subject of microscopes, with true Yankee perseverance and ingenuity, set about the construction of one of these instruments. Although he had never seen but one microscope, and that only for a few minutes, and had never seen a piece of glass ground, he devised his own tools and processes, and, in the course of a few months, produced an instrument, which he exhibited to the American Association, at Cambridge, in September. The power of this instrument was about 1,300, and it received the most unqualified commendation of the distinguished men there assembled. Professor Agassiz, after a careful examination of it, made a report, in which he spoke in the highest terms of its excellence. This instrument was purchased by Amos Lawrence, Esq., of Boston, who liberally presented it to the academy at Groton, Mass.

By the advice of Professor Agassiz, Mr. Allen immediately commenced the construction of another microscope, with some improvements suggested by Professor A. This new instrument he completed in about three months. It was submitted to the inspection of Professor Wyman, of Harvard University, who carefully compared it with a similar microscope manufactured by the celebrated Oberhauser, and by him exhibited as one of his best instruments. The American specimen was found to be fully

equal, if not superior, to the European, and there can be no doubt that it is the most excellent microscope ever produced in this country.

"It may not be improper to mention, that Mr. Clark, of Boston, has succeeded in producing very fine telescopes, and that excellent chronometers are now manufactured in this country."

"*Further Researches on Electro-Physiology.*—We translate, from the Comptus Rendus of the French Academy, the substance of a paper by M. Matteucci, on electro-physiology. He commences by recapitulating the four principal points from which he started, and which, in some degree, form a summary of his former labors.

" '1. In each cell of the electric organ of fishes, the two electricities become separated under the influence of the nervous activity propagated from the brain towards the extremities of the nerves. A relation exists between the direction and the intensity of the nervous current, and the position and the quantity of the two electricities developed in the cell.

" '2. It has been shown by experiment that the greatest analogy exists between the discharge of electric fishes and muscular contraction. There is no circumstance which modifies one of these phenomena, that does not equally act upon the other.

" '3. The contraction of a muscle develops in a nerve which is in contact with it the cause by which the nerve excites contractions in the nerves throughout which it ramifies. Analogy leads us to consider this phenomenon a proof of an electric discharge developed by muscular contraction, though this has not been decided by experiment.

" '4. The electric current modifies the excitability of the nerve according to its direction: when propagated in the direction of the ramification of the nerve, it destroys

its excitability; but when propagated in a contrary direction, it augments it.

"'I shall now confine myself to communicating a result which I regard as fundamental to the theory of electro-physiological phenomena. By a simple experiment, I have shown that an electric current, which traverses a muscular mass in the direction of its fibres, develops in these filaments a nervous current, which direction varies with that of the electric current, relatively to the ramification of the nerve. This is the reaction of electricity upon the nervous force. In discovering a new and very intimate analogy between the electric discharges of fishes and muscular contraction, I have shown that the nervous current develops the two electricities in a determinate direction, according to its own direction. In a muscular mass, the two electric states, diffused through the elements of its fibres, produce a current, whose direction varying with that of the electric current, is established, like the direction of the discharge in the torpedo fish, by that of the nervous current which excites it. This foundation of the electro-physiological phenomena I have taken great pains to establish.

"'Whatever may be the nature of the nervous force, it is a fact that this force is propagated in the nerves, sometimes from the brain to the extremities, and sometimes in a contrary direction. It is probable that, when the muscles are contracted by our will, a nervous current is propagated in the direction of the ramification of the nerve; but, on the other hand, the nervous current follows an opposite direction when sensation is experienced by the stimulation of the extremities of the nerve.

"'I have shown, in my former researches, by experiments, the great difference between the nervous and the muscular substance, as regards the conduction of the electric current. These experiments I cannot repeat, but will confine myself to one, which may be applied to the case in point. This experiment consists in introducing

the nerve of a sensitive galvanoscopic frog into the interior of a muscular mass, cut in the direction of its fibres. On passing a tolerably strong electric current through this mass, contractions are never excited in the prepared frog. It is then proved, that, when a muscular mass is traversed by an electric current, the nervous filaments diffused through the mass do not produce any sensible part of this current, so that the effects obtained can be due only to the direct action of the electric current upon the muscular fibre, and to the indirect action or the *influence* of the electric current upon the nervous force.—The following are these effects. If, in a living rabbit, dog, or frog, we expose the muscles of the legs, and pass an electric current from a pile of thirty or forty elements through the muscles, applying one of the poles to the upper and the other to the lower part of the leg,—if the positive pole is placed above and the negative one below, so that the electric current traverses the muscular substance in the direction of the ramification of the nerves, a very powerful contraction is produced, not only in the muscles of the leg, but also in those of the foot.

"'These results can be explained in but one way. The very powerful contraction excited by the electric current proves the existence of a nervous current passing from the extremities towards the centre, and developed under the influence of an electric current which traverses the muscular mass in the contrary direction to that of the ramification of the nerve. These conclusions have an important connection with the law of electric discharges in fishes, which arise from the production of a nervous current by the stimulation of the nerve, which is distributed in the organ. But in the experiments described, a nervous current is produced by the electric discharge passing through the muscle. In the *discharge of the torpedo, therefore, the electric states are produced by the animal, while in the experiment the nervous current is produced by the influence of the electric current.*'"

"*Physiological Acoustics.*—In order to ascertain the causes of the same body communicating to our ear different tones at the same time, M. Duhamel has made the following experiment. A caoutchouc thread connected consecutively with different points of an oscillating plate, producing simultaneously two or three notes, was conveyed to one ear, while the other was stopped. He convinced himself that an impression of sound could arrive at the ear in this manner only, and yet all the notes were audible at the same time at all the different points. Hence Duhamel concludes, that if the oscillatory motion of one point be decomposed into several others, the ear is affected in the same manner, whether the component movements emanate simultaneously from several neighboring points, or from one point only."

"*Annihilation of the Smell of Musk by the Ergot of Rye.*—The emulsion of bitter almonds possesess the property of annihilating the smell of musk, and most of the cyanic preparations evince the same power. According to M. Mertot, a druggist of Bayeux, in Normandy, ergot of rye will produce the same effect. 'I had, said he, 'to prepare a number of pills, containing both musk and ergot,—hardly were the two substances mixed, than the smell completely went off, so much so, that the patient, who was not aware of the nature of the pills, only noticed the musk by the effects of flatulency."—*Journal de Chimie Médicale.*

These extracts will serve as something of an indication of the character of this excellent and very useful book. We hope that no one of our readers will hesitate about ordering the work. The remittance of one dollar to the publishers, Gould, Kendall & Lincoln, of Boston, will secure the transmission of the book, by mail, free of postage.

ART. V.—*A Practical Treatise on Inflammation of the Uterus and its Appendages, and on Ulceration and Induration of the Neck of the Uterus.* By JAMES HENRY BENNET, M. D., M. R. C. P., Physician-Accoucheur to the Western General Dispensatory; formerly House-Physician (by concours) to the hospitals Saint Louis, Notre Dame, La Pitie, and La Salpetriere, Paris. Second American, from the second London edition. Philadelphia: Lea & Blanchard. 1850.

This is one of the most valuable guides in the treatment of the diseases of the Uterus and its appendages, that we know of. It is the production of a patient observer, and of a clear and accurate master of the science of diagnosis, in full possession of all the means for a perfect mastery of the subject. The former edition of the work was hailed with general approbation, by the medical profession; but the present edition is almost a new work.

The author claims a great deal of originality in various fields of investigation, and a careful study of the book, and an attentive observation at the bedside, will abundantly sustain his claims, and we earnestly commend this work to all who pay any attention to the diseases of females. It will be found eminently trustworthy.

The remarks of Dr. Bennet, on the use of the speculum in the treatment of the diseases of females, are amply confirmed by the admirable little treatise, written by Dr. Thomas R. Mitchell, of the Southeastern Lying-in Hospital, Dublin.

The admirable work of Dr. Bennet may be found at the bookstore of Beckwith & Morton.

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

New Instrument for Operating on Hemorrhoids. By M. Amussat.—M. Amussat has invented a new instrument for the eradication of these troublesome companions. It is a small forceps, somewhat like a dissecting forceps.—The points, or rather the branches, for one-third of their length, are split, and receive two small hollow cylinders, which are charged with Vienna caustic at the moment of operation. The branches of the forceps are brought together by a screw, and the base of the pile attached by constriction and cauterization conjointly. When the instrument has acted for some time, a jet of cold acidulated water is directed on the part, to remove the superfluous caustic and allay the sensation of burning. M. Amussat has already applied his instrument in practice with complete success.—*Medical Times, July* 14, 1849, *p.* 28.

Impropriety of Frequent Operative Interference in Midwifery. By Dr. R. Collins, Dublin.

[Dr. Collins gives an account of 3847 labors attended by the late Dr. Joseph Clarke, of Dublin, in which he used instruments remarkably seldom. Dr. Collins says:]

It may be observed he only used the forceps once, and that without completing the delivery. If we seriously reflect upon the happy results to the mothers, from the practice pursued by this distinguished physician, as re-

gards the use of instruments, and then carefully examine the succeeding section upon children still born, and find here equally happy results (as of the 3816 single births, there was only forty-two children still-born, of those that had arrived at the full period of gestation, or in the singularly small proportion of one in 91), we cannot fail to discover a number of astounding truths, sufficient to warn our artificial advocates, and make them pause until they can supply their professional brethren with a series of facts equally satisfactory.

How seldom should most practitioners be found to use instruments, if the successful course pursued by Doctor Clarke were universally aimed at. Is it not worthy of our best consideration, with the invaluable statement before us, that, in an extended practice in the upper ranks of life perhaps unexampled, there is not *one single instance of death* resulting from laborious or protracted labor! This is a practical fact, which ought to be carefully recollected, and seriously weighed, by most of our continental brethren, who use instruments in every fifth, tenth, fifteenth, twentieth, or thirtieth labor under their care, with the object of expediting delivery; as also by some of our own countrymen, whose unsound doctrines, inculcating mischievous interference to promote hasty delivery, the unquestionable truths here recorded clearly demonstrate to be most unjustifiable and most uncalled for. Should not this inexpressibly important record forever silence those who venture to publish crude and fanciful opinions, unsupported by any data from their own experience, affording similarly happy results. It affords me infinite satisfaction to supply this truthful registry of facts for the universal and serious consideration of the profession. These truths speak in language the most convincing, and must, when studied, leave an indelible impression.—*Med. Gaz.*, *July* 20, 1849, *p.* 122.

New Remedy for Leucorrhea.—In the Boston Medical and Surgical Journal, Dr. Braman states that for nine years he has been in the habit of using preparations of helonias diœcia (unicorn plant) as a remedial agent. He considers it particularly applicable in such affections as

have their origin in atony of the generative organs of both sexes—but particularly the female. "In leucorrhea," he says, "I consider it invaluable. I use it with a confidence I attach to no other medicine. Under its influence the patient, whose life has been almost a burden, soon revives. Her uncomfortable sensations vanish, and ultimately, an entire recovery of health and strength is established." It may be given in the form of powder, tincture, or syrup; but the latter is the most eligible.—The doses which Dr. Braman recommends, are of the powder, one drachm and a half; of the tincture, one fluid drachm; of the syrup, three fluid drachms. These doses are to be taken thrice a day, half an hour before the ordinary meals; and according to the urgency of the case, the quantity administered may be increased, if the patient bear it well. In irritable stomachs, nausea is sometimes produced; and when this occurs, the dose must be diminished.

On Opacities af the Cornea. By Dr. J. C. Hall.

[Dr. Hall remarks that it is very important to distinguish those opacities of the cornea which will require the assistance of art. He says:]

Opacities of the cornea, arising as they do from a great variety of causes, admit of division into three classes—

1st. Opacities resulting from the original structure having been destroyed by sloughing, or ulceration, followed by a deposit of opaque matter forming a cicatrix.

2nd. Opacities resulting from the application of a powerful escharotic.

3d. Cases in which opaque matter is deposited upon the texture of the cornea, without any previous loss of structure.

Treatment of Opacities of the Cornea.—Simple nebula of the cornea can be removed without much trouble by the daily application of a solution of nitrate of silver in distilled water—(distilled water, seven drachms; nitrate of silver, one to three grains; wine of opium, without the aromatic, one drachm.) Or what is better still, in more severe cases, by the following drops, which I have now been in the habit of prescribing very frequently during

the last ten years, and with much advantage:—Take of the bichloride of mercury, two grains; distilled water, an ounce: mix for a lotion, to be used once or twice a day. I would repeat, that whatever lotion be employed, it is far better not to drop it into the eye as we commonly see, even in hospitals; a camel-hair pencil should be dipped into the solution, and the opaque spot touched with it, by which means the remedy is at once brought into direct contact with the part to which you wish its operation to be confined, and that, too, without decomposition or dilutation from the tears, which must always be the case in the ordinary method.

Whoever has had much experience in diseases of the eye, will have observed that whenever any of these drops are employed for the purpose of removing opacities of the cornea, after a few weeks they appear to lose their useful effect, the disease becoming, as it were, invincible to them; I would, therefore, suggest that the nitrate of silver ointment, or drops, should be used for a week or ten days; then a weak solution of the bichloride of mercury; then the opium wine, and then the nitrate of silver a second time. This plan keeps up a continued state of improvement, and the disease is removed in a much shorter space of time than if one of them only had been persisted in.

When a patient comes before us with the worst possible form of opacity, leucoma arising, as is too often the case, from extensive ulceration, which has altogether changed the nature of the corneal surface, or with an extensive opacity, resulting from the application of a powerful escharotic, (which, although it may not have destroyed the vitality of the part, appears to have produced some chemical change in its structure,) it is quite labor in vain to attempt the cure of such an affection, and truly dishonest, time after time, to pick the pocket of the unfortunate patient of fees, by exciting hopes which can never be realized—hopes, the blighting of which, in the end, much increase his misery. Still, although this opacity cannot be destroyed by any means at our command, nor removed by the surgeon, this admission often only applies to the central portion of leucoma. In many cases we have the happiness to find the edges becoming gradually less and less opaque; a halo of hope surrounds

this dimness of vision, and although it may not be within the compass of our art to improve the more dense central portion, something may yet be effected with the surrounding edges; and I have been consulted in cases where a steady continuance in the application of remedies has most certainly produced very great benefit, and the results recorded in the archives of the profession are doubtless such as to justify their use in many of these unfortunate cases.

According to my experience, the most useful remedy is the nitrate of silver ointment, of a strength proportioned to the condition of the affected eye. Counter-irritation should also be kept up behind the ears or at the nape of the neck by blisters. Many advise certain ointments advise certain ointments or liniments, for producing irritation on the skin. I have little practical experience of their effects, but a very short trial of them most fully convinced me that they were very inferior to blisters. In the first place, several days must elapse before any useful influence can be exerted, and, in addition to this loss of time, which is often highly importent, I am much mistaken if this St. John Long practice of applying plasters of tartarized antimony, &c., above the eyebrows, does not often produce permanently mischievous results, and too much care cannot be exercised in daily watching their effects, more particularly when applied to the head and face of young persons, in whom, in some cases, their application has been followed by a state of inflammation and sloughing which has even threatened the loss of life.

During certain stages of many inflammatory actions existing in the eye, setons and issues can be most advantageously employed. They are easily made by the surgeon, cause little pain or trouble, can be enlarged or diminished at pleasure, and being perfectly manageable, combine, within any limits we may be inclined to mark out, the advantage of a moderate degree of counter-irrition with a most salutary discharge. The advantages connected with the use of blisters are many—the convenience of their application—the rapidity of their operation—the quick subsidence of their effects when no longer required. There may, however, be cases in which, from peculiar irritability of the skin, from the liability of

the patient to attacks of erysipelas, or from their having, on some former occasion, produced a violent effect on the urinary organs, some other form of counter-irritation must be used, rather than blisters.

The following is the form in which I have usually employed the nitrate of silver ointment:—To take nitrate of silver, from three to ten grains; solution of diacetate of lead, twenty drops; lard, one drachm. This ointment must be used every night or every second night. A very small portion (not larger than a large shot corn) being put into the eye. It always creates more or less ophthalmia, and its application must be regulated accordingly.

During the employment of this ointment, I would in many cases most strongly advise the internal exhibition of the bichloride of mercury. When there is nothing to counter-indicate its use, I have given it for six or eight weeks in the following form, without any severe affection of the gums, irritation of the bowels, or any other symptom requiring that the dose should either be intermitted or reduced. Ordered solution of bichloride of mercury, one drachm; tincture of bark, one drachm; distilled water, seven drachms and a half. To be taken twice a day.

As an alterative, the bichloride or oxymuriate of mercury, though doubtless more frequently prescribed than formerly in these cases, is not, I venture to think, so extensively used as it ought to be. It can be given in solution, which is of considerable advantage, rendering its action much more certain, more equal, and by readier absorption probably more effectual in producing an alterative influence upon the whole system.

Dr. Holland remarks that he has "seen its influence in augmenting the secretions, procuring the absorption of morbid growths, altering the state of the skin in many cutaneous disorders, and changing the character of morbid actions generally throughout the system, in cases where he believes no other medicine or combination of medicines would have had equal effect. Its combination with bark, steel, sarsaparilla, &c., afford resources of the greatest value in the treatment of disease; and, though otherwise held by common opinion, he thinks it on the whole, as safe a medicine as calomel in the hands of the practitioner, inasmuch as its distribution can be made as equal and determinate, and its effects, from being given

in a state of solution, are much less likely to be interrupted by mechanical hindrances in the stomach and bowels."

I would also add, and it is worthy of note, that this medicine (bichloride of mercury) may be continued in uninterrupted use for a very considerable period, without obvious injury or inconvenience, and in certain cerebral and spinal affections, a long, unbroken course of this preparation, is of singular avail, but to reap its fullest benefits, we must be watchful, patient; and decided in its use, for in cases in which, in the end, the happiest results follow the administration of the remedy, the changes are often the slowest, and not testified by those instant and obvious results which are sometimes desirable to fortify even the mind of the physician in the perseverance proper to the practice, still more to convince the patient, his family, and friends, that time is necessary for the development of the full and complete advantages of the means employed. Thus it frequently happens that the patient, alarmed, it may be, at the name of the medicine, and by the precautions taken as to its dose and effects, or tired by the little progress he appears to make, refuses to go on with the remedy, very often at the moment when becoming most effective, and when there was every reason for thinking a dangerous or distressing malady would eventually yield by a further employment of it. I have many times seen the beneficial results arising from a long continued use of small doses of the bichloride of mercury, in solution, in chronic iritis, and also in several cases of paraplegia, the slow progress of the case giving full scope for its effects, and the great danger in prospect justifying a long trial of the remedy. Of course, in strumous children, mercury in any form can seldom be employed with advantage, and in treating opacities of the cornea in them, in addition to appropriate remedies to the eye, it will be necessary to strengthen the system by attention to diet, shower-baths, sponging the body with cold water, the administration of the disulphate of quinine, and a residence of some months during the summer, when the circumstances of the parents will permit, at the sea-side.—*London Lancet.*

Case of Malignant Tumor, of eight or ten years' standing, cured after two years by a strict diet of bread and milk; with remarks. [Read before the Boston Society for Medical Improvement, by Henry I. Bowditch, M. D., one of the physicians of the Massachusetts General Hospital.]

In accordance with your request, I copy for your Journal my notes of the very interesting case of Dr. Twitchell. I obtained them from him during my late visit to the Granite State, and he kindly allows me to publish them. Every medical man, I presume, is somewhat acquainted with Dr. T. He is one of the most noted of our New England surgeons. His circuit has a diameter of fifty miles—and he has always, even while suffering from the local disease I shall endeavor to detail, been able to drive a hundred miles, if necessary, in the twenty-four hours, and in his own carriage, over the hills of his native State. The medical history of his life is extremely interesting. I shall, therefore, give that, very briefly, before entering upon the consideration of this local disease.

1st. Carcinoma has appeared in his family. His grandmother died of cancer of the mammæ; his sister of a scirrhous pylorus. These are all the data of his hereditary tendencies that bear upon our main topic.

2d. In very early life, Dr. T. was in delicate health.—As a youth, he was stronger, and was among the foremost in all athletic sports. While at college, he became dyspeptic, had icterus, with enlarged liver, &c.; subsequently, he passed gall-stones. Whilst pursuing the studies of his profession, he began to suffer from asthma, and for about twenty years was very much subject to violent attacks of it, causing orthopnea, &c. During all this period he ate animal food very freely, three times daily, and digested it easily, whereas vegetable food caused dyspeptic difficulties. Being induced, owing to a severe acne of the face, to abandon this course, he gave up, for nine years, the use of meat. From the period at which he first abandoned meat, he has never had an attack of asthma, and Dr. T. considers these two facts related to each other, as cause and effect. Moreover, vegetable food was soon easily borne. After the nine years

of vegetable regimen, he began gradually to resume the use of the milder kinds of animal food, such as poultry and somewhat of the more solid meats, until two years since, when he commenced the very rigid diet, which will be described when treating of the local disease, which is the more immediate object of this paper. Finally, I will state, as indicative, perhaps, of the tendencies of the cutaneous system to morbid action, that about four years ago he had a papular eruption, lasting six weeks; and, likewise, that very many years ago he had a wart-like tumor on the scalp, which disappeared under the use of creosote, externally applied. I should have stated above, that the acne disappeared after the use, for some months, of a vegetable diet.

3d. The local disease, the course and result of which, I present as the chief object of interest, commenced eight or ten years since, as a small but hard tumor at the internal angle of the right eye. When first noticed, it was about as large as a mustard seed, and not painful.—He occasionally touched it, and had some suspicion that it might eventually prove to be of a malignant character. It was imbedded in the substance of the cutis, and from the first seemed very slowly to augment in size. At times he *thought* he felt some lancinating pains in it, which radiated to the brow. It did not, however, interfere with the functions of the lachrymal ducts, &c.—About 1843, the tumor had become nearly as large as a pea, and a tendency to the formation of a scab was observed. He then was induced to try some local applications, and frequently, until 1845, used Jennings's ointment. This would remove the scab, and displayed three small lobes, from which exuded a little purulent fluid.—At first the morbid growth seemed lessened by this and other milder applications, but no permanent effect was produced. At times, the discharge ceased, but only to return again, and the tumor gradually lost its trilobed aspect. It was, at this period, quite conspicuous to every bystander.

August, 1845, Dr. Geo. Hayward, of this city, removed the major part of it with the scalpel. For a short time, the wound seemed doing well; but, finally, it did not heal, and two months afterwards it was operated on again, and nitrate of silver was applied. Meanwhile,

however, there had been experienced much local pain.—It was deeper seated, less transitory, and radiated towards the brow and cheek. Sometimes it was severe enough to awaken him at night, and was worse usually after long journies.

The applications during 1846—7 were chiefly of a very similar character—cold cream, preparations of zinc, &c., and once the iodide of lead. All active applications caused inflammation of the conjunctiva. The tumor continued to augment slightly, and in the spring of 1847, it presented to my eye a decidedly malignant appearance. It was an ulcer, about the size of the top of the finger, with ragged, hard, elevated edges, and the irritation from the discharge caused the patient frequently to apply his handkerchief to the part. At night it caused a glueing of the lids and a discharge on the side of the nose. I certainly believed, and Dr. T. tells me that he thought, at the time, that the disease would gradually augment and involve the eye—and he had determined, if necessary, to have this organ extirpated. His general health, as it has been already stated, continued good; but, when not actively employed, the mind was somewhat depressed at the prospect before him. At the meeting of the American Medical Association in Philadelphia, May, 1847, he consulted several of the eminent men whom he met; and I believe, I may say, that all regarded it as a disease of a most serious nature, although some thought it might be cured by local applications, and others advised a further operation.

Dr. T. returned home discouraged, and he decided to give up all use of medicines internally or of external applications, but to try a course of the most rigid diet.—Starting from a theory that malignant diseases arise from the fact that we take too much carbon in our systems, he determined to live from that time upon a bread and milk diet; and if at the end of some months he did not find any diminution in the disease, he still determined to use nothing but bread and water. Since his return from Philadelphia, he has strictly adhered to the bread and milk. He has used three times daily from four to six ounces of cream, or the richest milk, and the same quantity of either white or brown bread. He continues that diet still.

The results upon the local disease have been as fol-

lows:—The pains in the part were lessened almost immediately. The purulent discharge very soon began to diminish, and in two or three months it was evident that the disease was not augmenting. During the following winter the improvement was more decided. In the spring of 1848, being obliged to ride over dusty roads to great distances, the eye was more irritated. Nevertheless, he felt, and his friends assured him, that the diseased part was really lessening and tending towards a cure. Since that period a steady improvement has taken place. The ulcerated mass, which was so perceptible to me two years since, has wholly gone, and now (August, 1849) I can discover no difference between the angles of the two eyes, save that in the right one there is a minute white spot, about a line in diameter, looking like a cicatrix. It is not harder than the adjacent parts, and had I not known of the existence of previous disease, I should not have noticed even this. There is no discharge, no pains, and a perfect cure seems to have been accomplished of a disease that had been existing for about ten years, in a patient aged sixty-eight years.

The effects of this rigid diet upon the constitution, as a whole, are interesting.

In his mental estate, Dr. T. thinks he has been much less irritable than when he was *omni orous.*

He had, at one time, an attack of vertigo (to which, however, he has been always liable), and finding that he was *growing corpulent* under the diet, he, for a time, took less of it.

He has always been as strong, as when indulging in a more generous diet.

He has been able to breathe better, having had less tendency to dyspnea.

His digestion has been good, but with a slight tendency to costiveness.

His organs of circulation have been unaffected.

Renal excretion, for years a little disturbed, as is not unfrequently the case in persons of his age.

Finally, Dr. T. presents, to my mind, the picture of a hale, robust man, in perfect health, so far as one can perceive, and but slightly touched by the influence of his many years of honorable and successful labor.

Reflections upon Dr. T.'s case.—The most important

topic involved in the foregoing record, is the restoration to health from what seemed to be malignant disease, and that this result followed the strict diet of bread and milk for two years.

2nd. The cessation of asthmatic difficulties, after they had troubled the patient for twenty years, and that this cure likewise followed the change of diet—from an almost strictly animal diet to one quite the reverse, viz: strictly vegetable.

3d. Some readers may ask, if these two cures are not merely examples of the "post-hoc;" and they may deny that there is any complete evidence of the "propter-hoc." I consent to the doubt, for it has entered my own mind. Nevertheless, if they are mere coincidences, they are pregnant with important suggestions. I confess that, in my own practice, I have never met with any cases so significant of the power that diet, simply and heroically used, has to *re-organize* a man.

4th. Dr. T.'s case becomes interesting as an evidence of the power of a man to subject his body to strict rule. In this epicurean age, it is quite refreshing to find one who "eats to live, and does not live to eat." A worthy professional brother, of this city, said, when the case was related to him, "It might certainly be a question whether life was desirable under such a regimen?" I honor a hero wherever I find him, and the heroism of Dr. T., in undertaking and pursuing this course so long, merely in consequence of a theory, excites in me the greatest delight. In this sceptical, unbelieving era, I like to see any one having *faith*. Whether the theory was correct or not, it matters little—the fixed will of its follower arouses my enthusiasm; and this brings me to another topic of interest.

5th. The theory which governed Dr. T.—was it correct? I confess that I am unable to solve the question; I merely suggest it. Some, whom I consider as our ablest animal chemists, think that it was by the process of starvation, as described by Liebig, that the cure was wrought. It seems to me that this cannot be the true explanation—for Dr. T. has always been stout, and it will be remembered that at one time he actually gained flesh under the diet.—*Charleston Medical Journal.*

THE WESTERN JOURNAL.

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THIRD SERIES.—VOL. V.—NO. V.

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LOUISVILLE, MAY 1, 1850.

A PROFESSORIAL THERSITES.

A character of this kind has recently taken us to task for not conducting this Journal in a way to please him, and, as a specimen of his "good breeding" and veracity, undertakes to make his readers believe that we had written the word "unbeknown" in our article on the bandage, when he knew it was quoted from the writings of a gentleman who published the report of a case, in 1838.

The quarrelsome genius, to whom we refer, is in great agony because his Agamemnon has received some fancied slight at our hands. We owe the spirit of the scolding neither excuse, explanation, nor apology. But our exemplar seems to feel that he owes a disclaimer of any connection between his idol, and a malignant, vulgar, billingsgate specimen of slang that recently adorned a medical journal, which is now in the hands of our termagant. The disclaimer, however, amounts to nothing—*we know that it is false.*

But it is strange that after showering his malice and vituperation upon us, for not kneeling as low at the shrine of his idolatry, as he does, and after cackling at a terrible rate over a word, quoted from an article printed twelve years ago, our scold permits his idol to make a singular

display of his classics, in a medical journal, under the control of "the defender of the faith." If the reputation of the idol were half as dear to our doughty champion, as he pretends it is, he certainly would have paid some attention to the article on fractures, in the April No. of his Journal, and would not have permitted the article to appear in a style, in which typographical blunders, grammatical errors, and rhetorical sins strive for the mastery. We should not have attempted the ungracious task of pointing out these things, if the work had not been forced upon us as an act of self defence; and, even now, we shall confine our references to those blunders that lie upon the surface.

As a specimen of the typographical errors, the word bony is repeated ly spelt "boney." The entire essay is studded with typographical blunders, which an editor should have corrected, in an article written by one for whom he pretends to feel a prodigal esteem.

But grammatical errors also abound. On page 430, "removal and reapplication" are made antecedents to "this." The first sentence of a distinct paragraph, on page 438, reads thus: "***Fifteen days*** transpired before *they* became so loose as to render it necessary to remove and reapply them, after the same manner." How did the fifteen days become loose, and how were they removed and reapplied? If "they" does not refer to the fifteen days, to what does it apply? And it must be a matter of curious inquiry how either one day or fifteen days could, by any possibility "transpire." Days have no epidermis for excretions to pass through. Transpire is strictly a medical term, and, as such, always means an excretion from the skin. When not used in its medical sense, transpire means the passage of any thing from a state of secresy to publicity, and it never can be used with any, the least approach to correctness, except in one of these two meanings. It would be just as proper to say that fifteen days sailed or rode on horseback, as to say they transpired. If our correspondent, "C.," so invidiously referred to by our assailant, has any special fondness for these things, he must be something more than a glutton, if he desires a more liberal feast than he can find in this recent repast. He may gather his pleasures here, as he would mushrooms in an autumnal pasture. On page 441, we read, "*one set* of muscles only *are* placed," &c. Again: "*its* mischievous effects," &c., "*is* familiarly known." On page 444, we have it: "as the disorganized *parts is* reduced." On page 450, we are told: "*a light regimen*, with a free state of the bowels, *were* enjoined." On page 432, we have an account of a patient, who, while on his way from

Lexington to a neighboring State, re-fractured his patella, and we are told: "Returning to town, after encountering some delay, I found the limb," &c. This would seem to show that the surgeon went to the country, and returned to town; when the writer was trying to say, that the patient returned to town.

Throughout the article, we find, scattered with a prodigal hand, such phrases as these: "Conclusion of the period," "conclusion of the second week," "conclusion of the sixth week," "conclusion of the fourth week." We should think that the merest tyro in philology would know that conclusion, in matters of time, cannot be used as a synonyme of end. The literal meaning of conclusion is the winding up of all arguments and reasoning, not the winding up of a week, or of any period of time, nor can it be correctly used in any other than its etymological sense.

This is but a portion of the classicalities referred to, and if a man's friends will thus treat him, what must he expect from his enemies? If any man ever had just reason for wishing to be saved from his friends, it is the victim of the bungling friendship before us. If the conductor of the Journal to which we allude, were as chary of the reputation of his idol as he pretends to be, he would not have permitted him to appear before the public in such a gala suit as we have described.

Another colleague of our scold appears in the same Journal, of which that colleague is also a conductor, in an article steeped in writing that would disgrace a schoolboy. We shall not dissect this rhetoric, but shall be content with a solitary specimen. On page 455, this lucid and elegant sentence occurs: "We are informed that important and fearful hemorrhages do not always immediately succeed to injuries of the kind, *but that they yet more times occur afterwards*," &c.

We think one specimen of that style is sufficient.

PROF. BIGELOW'S INTRODUCTORY LECTURE.—CLINICAL LECTURES.

We are indebted to Henry J. Bigelow, M. D., Professor of Surgery in Harvard University, for a copy of his excellent introductory lecture. We are especially pleased with the forcible and convincing manner in which Dr. Bigelow urges the importance of clinical instruction. On this subject there should be no difference of opinion among medical men; all should unite in an earnest endeavor to advance the interests of clinical instruction. One good clinical lecture may be worth scores of didactic performances, no matter how able the latter may be. We

would not disparage the value of didactic instruction; it is valuable, nay even essential in its place, but its importance is greatly lessened without it is connected with clinical teaching. And we confidently indulge the hope that the time will come, when the absurdity of attempting to teach medicine without clinics will be universally scouted.

On the subject of clinical instruction, Dr. Bigelow thus discourses:

"It has come to be questioned how far clinical instruction is essential to a course of medical teaching. Local interests or local exigencies have led to a discussion of the value of this method of imparting knowledge, and as seriously as if there were some doubt about it. Surely those who hesitate, do not consider the difference between words and things; between the aspect of a man himself and such a detailed description of him as the police might give; between visible and tangible disease, and a written history of it. No doubt an original fact and its description both gain access to the understanding; but there is a difference in the quality of the knowledge thus obtained. To value a possession, the mind must first have felt the want of it. Curiosity must first stimulate both its perception and its ability to retain. The mind asks a question, and is then polarized for the reception of a direct answer; and it is balked and wearied by an irrelevant reply. Now every protracted description, especially a lecture, is of the nature of a series of replies to which no question has been asked. A whole audience cannot ask or be answered at one time, and the alternative is to distribute information in bulk, that each may select something which will approximate his purpose.

"On the other hand, exhibit a case of actual disease, and every observer will put and answer in his own mind, and with the rapidity of thought, an endless variety of queries upon points in which, perhaps, he alone is deficient, and for the reception of which his mind alone is stimulated.

"Another point is more important. Sensible qualities must be described by reference to acknowledged standards; and we can thus measure heat, and space, and weight; but not shades of color, nor the attributes soft and hard, nor the varying outline of a curve. In the same way a personal examination will yield the qualities of an odor, a pulse, a tumor, an expression of the features, which pages of tedious description might fail to do. And the mind which painfully contemplates an abstraction, will seldom fail, at such a moment, to arrest some tangible association by which the abstract quality is permanently fixed.

"Clinical study is bed study. Here the student closes and grapples with the malady of whose Protean forms he has as yet only read. Here he learns at once the language of disease and the language of suffering humanity; and while his scientific sense is educated, his kindlier feelings are also developed. He learns to listen patiently, to sympathize; he learns to re-establish a facility in the manifestation of that stratum of kindly feeling which is generally upon the snrface in early youth, but which sometimes, in the process of education, gets imbedded beneath a show of indifference and insensibility.

"The dialect of disease is an especial object of clinical study. Is a fever settled? Is a cough seated on the lungs? Is there water on the brain? Such questions are as significant as if conveyed in the language of recondite science. On the other hand, there are propositions less intimately according with modern views. What is the cause of this? asks one. Is this a scrofula humor? Is it in my constitution? These, or even the vexed question of biliousness, may well perplex the votary of rigid science. Such queries suppose the physician to possess a truly intimate knowledge of the human frame. In the words of Sir Thomas Browne, two hundred years ago, 'They foolishly conceive that we visibly behold therein the anatomy of every particle, and can thereby indigitate their diseases; and running into any demands, expect from us a sudden resolution in things whereon the Devil of Delphos would demur; and we know hath taken respite of some days to answer easier questions."

In our judgment, these remarks present the subject in a proper point of view, and they merit the attention of all who have any interest in the subject of medical education. There are two important features of clinical teaching, on which every student should inform himself: there must be clinics to afford illustrations to the teacher, and there must be a teacher capable of making proper use of the cases. One of these features is as important as the other; and unless both are combined in one school, the whole attempt is a failure. The possession of multiplied and various specimens of diseased actions is of no great value without a teacher capable of making them speak in the instruction of students, nor is even a renowned teacher of much value without the clinical means. With these combined values, and a door thrown wide open to students who wish to enjoy the benefit of hospital instruction, a medical school should command confidence and public support.

In our former number we referred to Prof, Bartlett's clinical course

especially, because our remarks were founded upon predictions made in the fall, and because he had been untried, in the West, in that department. We owe to Dr. David W. Yandell the expression of our thanks for the efficient and zealous aid he gave towards perfecting the course of clinical medicine, in the Marine Hospital, the past winter. He is enti tled to the thanks of all who feel an interest in the progress of true science; that progress is based essentially on clinical instruction, and Dr. Yandlle's fine abilities in diagnosis, and in describing diseased movements have been conspicuously displayed during the recent course of medical lectures in this city.

An attempt is sometimes made, by those who have an itching palm for medical professorships, and very, very limited means for commanding the confidence of those desirous of being taught, to decry the common methods of clinical instruction, and the principle of *suppressio veri* is called into requisition. The representation is made that the only approach to clinical instruction is such as is obtained by hearing the lecturer describe the disease of the patient before the class. This is a manifest error. One of the chief values of hospital facilities is found in the means the students enjoy of seeing diseased actions in the hospital, and each one may make himself acquainted with the condition of every patient in the public wards. This, and the lectures of able clinical teachers constitute a fund of instruction that no falsehood can impair.

VETERINARY MEDICINE.

Dr. Edward Brooks, of Boston, who, three years ago, wrote for this Journal a highly interesting paper on veterinary medicine, returned, a few months ago from a protracted stay in Europe, where he devoted his time and fine talents to the study of the diseases of the horse. Dr. Brooks immediately entered upon the duties assigned him by the Legislative Agricultural Society, of Massachusetts, and has already delivered before that body, two lectures on the history and progress of veterinary medicine. We are pleased to find them mentioned in very flattering terms, by the public prints of Boston. In one of them he announced a series of lectures, of an extended and more practical character, for next winter. We but speak from personal observation, when we say that Dr. Brooks has cultivated the subject which he proposes to teach, with the most praiseworthy diligence and industry. We believe we but express the desire of every physician and humane man in the country,

when we wish Dr. Brooks's success may be equal to his merits, and that he may awaken an interest in the diseases of the horse, which shall lead to their being more generally and systematically studied.

DEMONSTRATIVE MIDWIFERY—THE BUFFALO MEDICAL JOURNAL.

Our valued and esteemed cotemporary, of the Buffalo Medical Journal, seems to have roused quite a professional warfare, by his approval of a specimen of demonstrative midwifery, exhibited before the graduating class of the medical department of the University of Buffalo. And we notice, too, in connection with this controversy, that the clergy, with their usual instincts and propensities for medical matters, have stepped forward to take a part in the affair, so that our friend Flint, if he should die in the warfare, will have the gloomy consolation of dying with the benefit of clergy.

We are really at a loss to understand the reasons for the extraordinary position assumed by the seventeen physicians whose names are appended to a letter, which appeared in the March number of the Buffalo Medical Journal, in which letter there is a bitterness of denunciation altogether unwarranted we think, by the circumstances. Such strong terms as "unprofessional in manner, and grossly offensive, alike to morality and common decency," are rather strong for use towards gentlemen, quite as able as the letter writers to appreciate what is professional, and what accords with morality and common decency. In our judgment, the letter writers agonized the matter quite enough, to say the least.

That there are circumstances which would make demonstrative midwifery open to such denunciations as we have quoted, we readily admit, but one of the plainest and most sensible rules of logic forbids us from arguing against the use of anything, from its abuse. As far as "we understand" the case that drew forth the denunciatory letter, there was no departure whatever from professional manner, nor from "morality or common decency." These are relative terms; what might be considered very indecent by one virtuous female, by another, might be looked upon in a different light. In the instance before us, the female acted voluntarily; no improper means were taken to procure her consent, and she was satisfied and pleased with the professional ministrations she received. Surely her judgment is worth something in a

matter of this kind; may we say that her satisfaction far outweighs the ponderous displeasure of her volunteer champions? There is nothing in the curriculum of a college that needs demonstrative teaching more than midwifery, and we regret that the opportunities for demonstration are so very limited. The seventeen physicians of Buffalo are evident ly not disposed to enlarge its means, and their views savor very much of the popular prejudices against dissections.

Dr. Bennet speaks very sensibly on a kindred subject, and his remarks may well be applied to the matter before us. He says: "In Paris hospital practice, the objections which exist in England to examination by the touch, or by the speculum, either are not met with, or are not allowed by those physicians and surgeons who pay special attention to uterine diseases; consequently, little more difficulty is experienced in appreciating, by their means, the symptoms furnished by the uterine organs, than in resorting to any usual means of investigation in diseases of other parts of the economy."

The indisposition of English physicians to investigate uterine disorders is thus referred to by Dr. Bennet: "That this laudable sense of propriety is, however, often carried much too far by the members of the medical profession with us, is well known to all who specially study uterine pathology." Is the practice thus commented on calculated to advance or retard medical science, or its healing powers? The answer is obvious, and that answer meets the case in the medical college of Buffalo.

We cannot withhold from Dr. Austin Flint the expression of our warm approval of his dignified, professional course. That he has the right side of the questiou, the strength of argument, and the force of professional precedents, we are well convinced.